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VICTIMS OF CLIMATE CHANGE AND THEIR STANDING TO SUE: WHY THE NORTHERN DISTRICT OF CALIFORNIA GOT IT RIGHT

Joseph M. Stancati[*]

"June isn't really June anymore."
- Canadian Inuit James Qillaq, suggesting to his fellow villagers that the Inuit word for June, *qiqsuqqaqtuq*, should be changed because it refers to snow conditions that no longer occur in June.[1]

INTRODUCTION

The United States government is preparing to relocate several Inuit villages along the Alaskan coast, where thawing permafrost is destabilizing the foundations of homes. Each of these relocations will cost at least one hundred million dollars.[2] A few hundred miles away, Canadian Arctic Inuvialuit[3] hunters risk falling into water as they navigate snow-covered areas where the ice underneath is rapidly receding or thinning.[4] Polar bears, a traditional food source for the Inuit, are themselves threatened by the retreat of sea ice, on which they depend to capture seals.[5] The bears could be extinct by the end of this century.[6] The Arctic Climate Impact Assessment found that the Arctic's climate in particular is warming at a rate that far exceeds the global average rate of warming.[7] By the end of this century, the

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[*] BA, Miami University of Ohio (2004); JD, Case Western Reserve University School of Law (2007). I particularly thank Alexander McClean and Eric Landen for their advice on this Note. I also thank my dad for his suggestions, and Professor Jonathan Adler for informing me of the case that is the subject of this Note.

[1] Steven Lee Myers et al., *Old Ways of Life Are Fading as the Arctic Thaws*, N.Y. TIMES, Oct. 20, 2005, at A1.

[2] *Id.*

[3] The "Inuvialuit" are Inuit people who live in the western Canadian Arctic region.

[4] *See* Myers et al., *supra* note 1.

[5] *Id.*

[6] Juliet Eilperin, *Study Says Polar Bears Could Face Extinction*, WASH. POST, Nov. 9, 2004, at A13.

[7] *See id.* ("The [Arctic Climate Impact Assessment] concluded that some areas in the Arctic have warmed 10 times as fast as the world as a whole, which has warmed an average of 1 degree Fahrenheit over the past century."). The Arctic Climate Impact Assessment resulted from four years of work by more than three hundred scientists. *Id. See also* INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE, *Summary for Policymakers*, *in* IPCC, CLIMATE CHANGE 2001: SYNTHESIS REPORT, at 1, 9 (Robert T. Watson et al. eds., 2001)

summertime Arctic Ocean may be ice-free, which has not occurred on Earth for at least a million years.[8] This trend of decreasing ice is likely irreversible.[9] One of the many consequences of this Arctic melting is coastal flooding.[10] The deglaciation of Greenland alone would elevate the sea level by up to six meters.[11] People living in the Arctic are distraught, knowing that their cultures and traditions are dying because of climate change.[12] Though their lifestyle produces virtually zero greenhouse gas emissions, they "are experiencing a disproportionate impact of the consequences" of global climate change.[13]

Arthur and Anne Berndt, a married couple who own a 530-acre maple sugar farm in Vermont (Maverick Farm), are similarly distraught by changes beyond their control. The farm they have owned for nearly twenty years comprises about 16,000 sugar maple trees, making it one of Vermont's largest maple syrup producers.[14] In recent years the farm has deteriorated: seed production is "unusually and exceedingly heavy," a sign that the trees are stressed; the regeneration rate of the trees has dropped, as new trees die when they are still saplings; dieback[15] is more prevalent in the

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[hereinafter *IPCC Summary for Policymakers*], *available at* http://www.ipcc.ch/pub/un/syreng/spm.pdf ("Nearly all land areas will very likely warm more than . . . global averages, particularly those at northern high latitudes in winter.").

[8] Jonathan T. Overpeck et al., *Arctic System on Trajectory to New, Seasonally Ice-Free State*, 86 EOS 309, 309 (2005).

[9] *See id.* at 312 ("The processes and interactions among primary components of the Arctic system, as presently understood, cannot reverse the observed trends toward significant reductions in ice.").

[10] Other consequences include: (1) the likely decrease of albedo ("albedo" refers to the capacity of ice to reflect light, which makes the Earth's temperature cooler than it would be otherwise) and (2) the possible release of large volumes of greenhouse gases previously contained in the permafrost. *Id.* Both consequences would accelerate the pace of global warming.

[11] *Id.* The study's authors state that such a complete deglaciation of Greenland "would take many centuries at present rates," but also note that "destabilizing mechanisms such as basal sliding" could expedite the deglaciation. *Id.* at 309.

[12] *See* Myers et al., *supra* note 1. Myers' article quotes an Inuvialuit, Hank Rogers, who lamented, "[t]he next generation coming up is not going to experience what we did. We can't pass the traditions on as our ancestors passed on to us." *Id.* Another Inuvialuit, Danny A. Gordon, said, "In the summer 40 years ago, we had lots of icebergs, and you could land your boat on them and climb on them even in summer. Now in the winter they are tiny. The weather has changed. Everyone knows it . . . is global warming." *Id.*

[13] Overpeck et al., *supra* note 8, at 312.

[14] Declaration of Arthur Berndt at 1–2, Friends of the Earth v. Watson, No. C 02-4106 (N.D. Cal. Feb. 11, 2005) [hereinafter Berndt Declaration], *available at* http://climatelawsuit.org/documents/Declr_Berndt_Final.pdf.

[15] "Dieback" is a plant disease caused by fungi that infect the roots of the tree and may eventually kill the tree. Symptoms of dieback are visible in the crown of the tree. *See* DEP'T OF CROP SCIENCES, UNIV. OF ILL. EXTENSION, REPORT ON PLANT DISEASE: DECLINE AND

crown of trees, resulting in diminished maple syrup production; temperatures below freezing, necessary for the trees to produce maple syrup, are less frequent and warmer.[16] The Berndts believe that climate change is the principal cause of this deterioration. Worse, they fear that their sugar maple trees soon may disappear from the farm altogether.[17] The 2002 U.S. Climate Action Report predicts "a significant northward shift in prevailing forest types," culminating in the virtual absence of sugar maple trees in Vermont by the last third of this century.[18] The report acknowledges that this shift will occur more rapidly than predicted if climate change also begets increased pest outbreaks, droughts, and other natural occurrences that decimate tree populations.[19] Facing the imminent and progressive loss of value of their farm, the Berndts are considering selling the trees as timber, but admit that they "are in denial because it is too depressing to consider the loss of Maverick Farm's long-term value."[20]

The Berndts are members of Friends of the Earth and Greenpeace, two of the Plaintiffs[21] in *Friends of the Earth v. Watson*,[22] a climate change lawsuit against two U.S. government agencies pending before the U.S. District Court for the Northern District of California. In August of 2005, the judge[23] ruled in favor of the Plaintiffs and granted them standing to sue the

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DIEBACK OF TREES AND SHRUBS 1–2 (1996), *available at* http://web.aces.uiuc.edu/vista/pdf_pubs/641.pdf.

[16] Berndt Declaration, *supra* note 14, at 2–3.

[17] *Id.*

[18] U.S. DEP'T OF STATE, U.S. CLIMATE ACTION REPORT 2002, at 97 fig.6–8 (2002), *available at* http://yosemite.epa.gov/oar/globalwarming.nsf/UniqueKeyLookup/SHSU5BWHU6/$File/uscar.pdf.

[19] *See id.* at 98 ("The effects of climate change on the rate and magnitude of disturbance (forest damage and destruction associated with fires, storms, droughts, and pest outbreaks) will be important factors in determining whether transitions from one forest type to another will be gradual or abrupt. If the rate and type of disturbances in New England do not increase, for example, a smooth transition from the present maple, beech, and birch tree species to oak and hickory may occur. Where the frequency or intensity of disturbances increases, however, transitions are very likely to occur more rapidly.").

[20] Berndt Declaration, *supra* note 14, at 3.

[21] Friends of the Earth and Greenpeace are suing on behalf of their members, including the Berndts and other members whose injuries are discussed *infra* Part III.B.

[22] Friends of the Earth v. Watson, No. C 02-4106 (N.D. Cal. filed Aug. 27, 2002). The official name of the case is now *Friends of the Earth v. Mosbacher*, reflecting the fact that Robert Mosbacher, Jr., is the new President and CEO of the Overseas Private Investment Corporation. *See* Defendant Ex-Im Bank's Cross Motion for Summary Judgment, Friends of the Earth v. Watson, No. C 02-4106 (N.D. Cal. Mar. 31, 2006), *available at* http://climatelawsuit.org/2006/Cross%20motionshow_case_doc.pdf. This Note calls the case "*Friends of the Earth v. Watson*."

[23] Judge Jeffrey S. White was nominated to the federal bench by President George W. Bush in 2002. Jeffrey White Nominated for U.S. District Court Bench, http://www.law.berkeley.edu/news/2002/white.html (last visited Feb. 18, 2007).

Defendants[24]—the Overseas Private Investment Corporation (OPIC) and the Export-Import Bank of the United States (Ex-Im)—for the agencies' failure to prepare environmental impact statements regarding the effects of their overseas energy projects on global climate change.[25] Never before had a plaintiff established Article III standing[26] in a lawsuit involving injuries caused by climate change.[27]

Before initiating this lawsuit, the Plaintiffs tried to induce the Defendants to prepare the environmental impact statements voluntarily. The Plaintiffs sent demand letters to OPIC and Ex-Im requesting that each agency prepare an environmental impact statement (EIS) to analyze the effect of its projects on global climate change.[28] Since Friends of the Earth and Greenpeace actively campaign to mitigate climate change, the EIS would provide useful information to the organizations about the impact of government action on the environment. OPIC and Ex-Im refused to prepare an EIS, claiming that an EIS was unnecessary because their projects did not significantly affect the environment. The Plaintiffs then brought this lawsuit under the National Environmental Policy Act of 1969 (NEPA),[29] which requires all federal agencies to prepare an EIS for any action "significantly affecting the quality of the human environment." The requirements of Article III standing traditionally have been an insurmountable obstacle for climate change plaintiffs, preventing them from exercising their right to sue the government under NEPA. Consequently, the *Watson* ruling, holding that the Plaintiffs have established all elements of Article III standing, is significant.

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[24] All uses of the capitalized "Plaintiffs" and "Defendants" in this Note refer to the *Watson* parties.

[25] Friends of the Earth v. Watson, No. C 02-4106 (N.D. Cal. Aug. 23, 2005) (order denying Defendants' motion for summary judgment) [hereinafter Order Denying MSJ], *available at* http://climatelawsuit.org/documents/ruling82305.pdf.

[26] "Article III standing" means the requisite standing for any federal plaintiff under Article III of the Constitution, which gives federal courts jurisdiction to hear "Cases" and "Controversies." U.S. CONST. art. III, § 2, cl. 1.

[27] *See U.S. Judge OKs Suit on Global Warming–Agencies' Financing of Overseas Energy Projects Challenged*, S.F. CHRON., Aug. 25, 2005, at B1, *available at* http://www.sfgate.com/cgi-bin/article.cgi?f=/c/a/2005/08/25/BAGCVECHVJ1.DTL. The Defendants filed a motion for summary judgment in February of 2005, alleging, inter alia, that the Plaintiffs lacked standing to sue under Article III of the U.S. Constitution ("Article III standing"). Defendants' Motion for Summary Judgment, No. C 02-4106 (N.D. Cal. Feb. 11, 2005) [hereinafter MSJ], *available at* http://climatelawsuit.org/documents/Def_SJMotion_Final.pdf. That motion was denied. Order Denying MSJ, *supra* note 25.

[28] Plaintiffs' Opposition to Defendants' Motion for Summary Judgment at 1–2, No. C 02-4106 (N.D. Cal. Apr. 29, 2005) [hereinafter Opposition to MSJ], *available at* http://climatelawsuit.org/documents/P_Opp_to_D_SJMotion.final.pdf.

[29] National Environmental Policy Act of 1969 (NEPA), 42 U.S.C. §§ 4321, 4331–4335, 4341–4347 (2006).

Part I of this Note outlines the scientific basis of global climate change, its present and future consequences, and the implications of the U.S. government's reticence to address those consequences through mandatory reductions of greenhouse gas emissions. Part I endeavors to demonstrate why some scientists and world leaders believe global climate change is the most urgent threat facing humanity. Part II explains the purpose and provisions of the National Environmental Policy Act (NEPA), which provides the statutory basis for *Watson*. Part II then examines the requirements for Article III standing under NEPA, and the reasons that previous climate change litigants have been unable to meet those requirements. Part II concludes by summarizing the Supreme Court's "constrained" articulation of Article III standing in *Lujan v. Defenders of Wildlife*. Part III introduces the *Watson* lawsuit by describing the Plaintiffs and their alleged injuries, and their theory of OPIC and Ex-Im contributions to those injuries. The purpose of this description is to distinguish *Watson* from the failed climate change lawsuits examined in Part II. Part IV analyzes the district court ruling that granted the *Watson* Plaintiffs standing. The analysis explains why the *Watson* ruling was correct under both Ninth Circuit precedent and *Lujan*, which is the thesis of this Note. Because the *Watson* ruling was correct, Part V predicts that the Ninth Circuit Court of Appeals would uphold the Plaintiffs' standing on appeal. Part V also explores the implications of the *Watson* ruling for future climate change litigation.

I. A DIFFERENT WORLD: CLIMATE CHANGE'S THREAT TO U.S. NATIONAL SECURITY

The global average surface temperature, which has risen by an estimated 0.6°C (1°F) since the late nineteenth century,[30] is projected to rise by between 2°C and 4.5°C (3.5°F and 8°F) above the 1990 level by the end of this century.[31] The Third Assessment Report (TAR) of the Intergovernmental Panel on Climate Change (IPCC) contains reliable evidence that human activity is causing most of the warming.[32] Emissions of carbon dioxide and other greenhouse gases[33] drive this temperature increase.[34] The at-

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[30] C.K. FOLLAND ET AL., *Observed Climate Variability and Change*, *in* IPCC, CLIMATE CHANGE 2001: THE SCIENTIFIC BASIS, at 101, 101 (J.T. Houghton et al. eds., 2001), *available at* http://www.grida.no/climate/ipcc_tar/wg1/pdf/TAR-02.PDF.

[31] U. CUBASCH ET AL., *Projections of Future Climate Change*, *in* IPCC, CLIMATE CHANGE 2001: THE SCIENTIFIC BASIS, at 527, 555 (J.T. Houghton et al. eds., 2001), *available at* http://www.grida.no/climate/ipcc_tar/wg1/pdf/TAR-09.PDF.

[32] *See IPCC Summary for Policymakers*, *supra* note 7, at 5–6; *see also id.* at 7 fig.SPM-2(a) (showing that natural (i.e., non-anthropogenic) forces, acting alone, would actually have caused a cooling of the Earth's temperature since 1950).

[33] In addition to carbon dioxide (CO_2), significant anthropogenic greenhouse gases include: methane (CH_4), nitrous oxide (N_2O), and tropospheric ozone (O_3). *See id.* at 4.

mospheric concentration of carbon dioxide has increased by 31% since 1750,[35] mostly due to human activities such as fossil fuel combustion.[36] Consistent with this increasing concentration, the 1990s were likely the warmest decade of the millennium.[37] Temperatures across the United States will increase by between 3°C and 5°C (5.5°F and 9°F) over this century.[38] In the southeastern and south-central United States, the average summer heat index is projected to increase by 12°C (21.5°F).[39] Heat waves will grow "more frequent, more intense and longer-lasting."[40]

In conjunction with the IPCC's Fourth Assessment Report (due in late 2007), fifteen scientific institutes worldwide are running "extended climate simulations." Using "various assumptions about energy use, economic development and population increase," these simulations project the global temperature increase over the twenty-first century.[41] Even using "the most optimistic assumptions" (i.e., assuming a dramatic worldwide shift toward renewable energy), the simulation at the Max Planck Institute for Meteorology in Hamburg, Germany, shows an ice-free summertime Arctic Ocean by 2090, corroborating the prediction of the Arctic Climate Impact Assessment.[42] The optimistic simulation also predicted increased extreme precipitation and extreme drought worldwide, and a forty-centimeter sea level rise by the end of the century (due to oceanic thermal expansion and some deglaciation of Greenland).[43] Although the negative consequences of

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[34] *See id.* ("The radiative forcing from anthropogenic greenhouse gases is positive with a small uncertainty range."). Emissions of carbon dioxide account for approximately 70% of the total anthropogenic contribution to global warming. *See* Pew Center on Global Climate Change, World Anthropogenic Emissions of GHGs, http://www.pewclimate.org/global-warming-basics/facts_and_figures/athroghgs.cfm (last visited Feb. 18, 2007).

[35] *IPCC Summary for Policymakers*, *supra* note 7, at 5 tbl.SPM-1.

[36] *Id.* at 4.

[37] FOLLAND ET AL., *supra* note 30. All IPCC reports discussed in this Note use the following terms to express confidence levels about particular conclusions: "*virtually certain* (greater than 99% chance that a result is true); *very likely* (90–99% chance); *likely* (66–90% chance); *medium likelihood* (33–66% chance); *unlikely* (10–33% chance); *very unlikely* (1–10% chance); *exceptionally unlikely* (less than 1% chance)." *E.g.*, *IPCC Summary for Policymakers*, *supra* note 7, at 5.

[38] Michael C. MacCracken et al., *Climate Change Scenarios for the U.S. National Assessment*, 84 BULL. AM. METEOROLOGICAL SOC'Y 1711, 1715 (2003), *available at* http://ams.allenpress.com/perlserv/?request=get-pdf&doi=10.1175%2FBAMS-84-12-1711.

[39] Declaration of Dr. Michael C. MacCracken at 28, Friends of the Earth v. Watson, No. C 02-4106 (N.D. Cal. Feb. 11, 2005) [hereinafter MacCracken Declaration], *available at* http://climatelawsuit.org/documents/Declr_MacCracken.pdf.

[40] *Id.* (citing Gerald A. Meehl & Claudia Tebaldi, *More Intense, More Frequent, and Longer Lasting Heat Waves in the 21st Century*, 305 SCIENCE 994 (2004)).

[41] Quirin Schiermeier, *The Costs of Global Warming*, 439 NATURE 374, 374–75 (2006).

[42] *See id.* at 375.

[43] *Id.*

global climate change will affect all regions of the planet, people who are already vulnerable to hunger and disease will be the first to experience those consequences acutely.[44] Rising temperatures are projected to increase the spread of infectious diseases, especially in poor tropical and subtropical countries.[45] Cereal crop yields are projected to decrease in these same countries, particularly where temperature increase coincides with decreased rainfall.[46]

As the Earth warms, many species are likely to disappear because climate change promotes infectious diseases.[47] Global warming was a "key factor" in encouraging outbreaks of a pathogenic fungus that has swiftly obliterated several dozen species of frogs in Central and South America, according to a *Nature* magazine study.[48] Since climate change is promoting infectious diseases and decreasing biodiversity, "the urgency of reducing greenhouse-gas concentrations is now undeniable."[49] Zoologist Andrew R. Blaustein and biologist Andy Dobson commented on the study, "[t]he powerful synergy between pathogen transmission and climate change should give us cause for concern about human health in a warmer world."[50]

According to Britain's leading scientist, Royal Society President Robert May, the consequences of global climate change are as serious of a threat to humanity as weapons of mass destruction.[51] Indeed, a 2003 U.S. report prepared for the Pentagon states that "climate change and its follow-on effects pose a severe risk to political, economic, and social stability" worldwide.[52] Global decreases in food production, access to fresh water,

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[44] *See IPCC Summary for Policymakers*, *supra* note 7, at 12 ("The impacts of climate change will fall disproportionately upon developing countries and the poor persons within all countries, and thereby exacerbate inequities in health status and access to adequate food, clean water, and other resources.").

[45] *See id.* at 9 (noting—with *medium* to *high* confidence—that climate changed will increase "ranges of disease vectors" such as malaria-carrying mosquitoes).

[46] *Id.* at 12.

[47] *See* J. Alan Pounds et al., *Widespread Amphibian Extinctions from Epidemic Disease Driven by Global Warming*, 439 NATURE 161, 161 (2006).

[48] *Id.*

[49] *Id.*

[50] Andrew R. Blaustein & Andy Dobson, *Extinctions: A Message from the Frogs*, 439 NATURE 143, 144 (2006).

[51] *See Hard-Core Evidence: As Climate Experts Meet in Montreal, the Case for Man-Made Global Warming Continues to Build*, HOUSTON CHRON., Nov. 29, 2005, at B8 ("The consequences 'are rising to levels which invite comparison with weapons of mass destruction.'") (quoting May). Among the consequences mentioned by May were a rising sea level, diminishing freshwater supplies in some areas, and increasingly frequent extreme weather events such as droughts, floods and hurricanes. *Id.*

[52] PETER SCHWARTZ & DOUG RANDALL, AN ABRUPT CLIMATE CHANGE SCENARIO AND ITS IMPLICATIONS FOR U.S. NAT'L SECURITY 5 (2003), http://oco.jpl.nasa.gov/pubs/Abrupt_Climate_Change_Scenario.pdf.

and energy supplies are among the resource constraints that could lead to such instability.[53] The report elucidates a "plausible" scenario in which global warming "lead[s] to harsher winter weather conditions, sharply reduced soil moisture, and more intense winds in certain regions that currently provide a significant fraction of the world's food production."[54] Ominously, the report raises the possibility of "a significant drop in the human carrying capacity of the Earth's environment."[55] Nations may fight wars as a means of acquiring the resources necessary for their survival.[56] An October 2006 review by former World Bank chief economist Nicholas Stern warns that climate change is set to have gigantic consequences for the global economy. The study predicts that climate change will reduce the current global gross domestic product by 5% to 20% by the year 2100 if greenhouse gas emissions continue at their present pace.[57] It also estimates that the cost of stabilizing greenhouse gas concentrations at relatively benign levels would be only one percent of the global gross domestic product.[58]

The United States has not ratified the Kyoto Protocol to the United Nations Framework Convention on Climate Change (Kyoto Protocol),[59] an agreement that now includes 157 countries committed to reducing their greenhouse gas emissions.[60] The objective of the Kyoto Protocol is a 5% reduction in global greenhouse gas emissions from 1990 levels for the period of 2008–2012.[61] The Kyoto Protocol became legally binding on February 16, 2005, after Russia ratified it in December of 2004.[62] Despite widespread support for its ratification among the American public,[63] President

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53 *See id.* at 2.

54 *Id.* at 1.

55 *Id.*

56 *Id.* at 2 ("Unlikely alliances could be formed as defense priorities shift and the goal is resources for survival rather than religion, ideology, or national honor.").

57 Jim Giles, *How Much Will it Cost to Save the World?*, 444 NATURE 6, 6 (2006).

58 *See id.*

59 Kyoto Protocol to the United Nations Framework Convention on Climate Change, Dec. 10, 1997, 37 I.L.M. 32 [hereinafter Kyoto Protocol].

60 U.N. Framework Convention on Climate Change [UNFCCC], Kyoto Protocol Status of Ratification (Dec. 13, 2006), http://unfccc.int/files/essential_background/kyoto_protocol/application/pdf/kpstats.pdf.

61 Kyoto Protocol, *supra* note 59, art. 3.

62 *Kyoto Protocol Comes into Force*, BBC NEWS, Feb. 16, 2005, http://news.bbc.co.uk/2/hi/science/nature/4267245.stm ("Russia's entry was vital, because the protocol had to be ratified by nations accounting for at least 55% of greenhouse gas emissions to become valid.").

63 A 2005 poll found that 73% of Americans think the United States should participate in the Kyoto Protocol. THE PIPA/KNOWLEDGE NETWORKS POLL, AMERICANS ON CLIMATE CHANGE: 2005, at 4 (2005), http://65.109.167.118/pipa/pdf/jul05/ClimateChange05_Jul05_rpt.pdf.

Bush has rejected the Kyoto Protocol[64] because it does not require developing countries like China to limit emissions, which he perceives as unfair to the U.S. Additionally, he believes that acceding to the Kyoto Protocol would lead to higher energy prices and harm the U.S. economy.[65] Australia is the only other industrialized nation that has not ratified the Kyoto Protocol.[66] The Bush administration instead has promoted a plan that relies on technological advances to control greenhouse gas emissions without setting mandatory reduction targets.[67] At the December 2005 United Nations Climate Change Conference in Montreal, Canada, the American delegation announced that the United States would not consider any measures to mandate a reduction of its greenhouse gas emissions.[68] Responding to this announcement at a news conference, Canadian Prime Minister Paul Martin said, "[to] the reticent nations, including the United States, I say this: There is such a thing as a global conscience, and now is the time to listen to it."[69]

Following Hurricane Katrina, a debate surfaced in the American media about whether and to what extent climate change affects hurricanes. While the scientific community has not reached a consensus on this issue, support is increasing for the theory that climate change and hurricane intensity are positively correlated. For example, Massachusetts Institute of Technology Professor Kerry Emanuel, a meteorologist and hurricane expert long known for his skepticism of any link between climate change and hurricanes, recently published an article in *Nature* magazine endorsing the connection between rising ocean surface temperatures and hurricane intensity.[70] Emanuel's article has significantly impacted scientific debate on the issue.[71] The article predicts that future warming of the oceans will lead to increas-

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[64] A majority of Americans are unaware of this fact. *See id.* ("Only 43% are aware that [President Bush] opposes US participation [in the Kyoto Protocol].").

[65] Paul Reynolds, *Kyoto: Why Did the US Pull Out?*, BBC NEWS, Mar. 30, 2001, http://news.bbc.co.uk/1/hi/world/americas/1248757.stm.

[66] *Bush Administration Unveils Alternative Climate Pact*, N.Y. TIMES, July 28, 2005, at A2.

[67] *Id.*

[68] Andrew C. Revkin, *U.S. Resists New Targets for Curbing Emissions*, N.Y. TIMES, Dec. 8, 2005, at A3. Although the United States has not ratified the Kyoto Protocol, it is a party to the United Nations Framework Convention on Climate Change, a treaty whose parties pledge to cut greenhouse gas emissions. United Nations Framework Convention on Climate Change, May 9, 1992, 1771 U.N.T.S. 107.

[69] Revkin, *supra* note 68.

[70] Claudia Dreifus, *With Findings on Storms, Centrist Recasts Warming Debate*, N.Y. TIMES, Jan. 10, 2006, at F2.

[71] *Id.* Stanford climatologist Stephen Schneider noted, "[Emanuel's] paper has had a fantastic impact on the policy debate. Emanuel's this conservative, apolitical guy, and he's saying, 'Global warming is real.'" *Id.*

ingly destructive hurricanes and a corresponding greater loss of human life and property.[72]

Uncertainty exists in the science of climate change. The arguments against reducing greenhouse gas emissions typically emphasize this point. However, as the science advances, the uncertainty shifts from whether we are affecting the climate, to how we are doing so.

II. THE NATIONAL ENVIRONMENTAL POLICY ACT AND CLIMATE CHANGE: PAST FAILURES TO ACHIEVE STANDING

A. NEPA's Purposes and Provisions

To address the environmental consequences of government actions, Congress passed the National Environmental Policy Act of 1969 (NEPA).[73] The stated purposes of NEPA include preventing environmental degradation and promoting human health and welfare.[74] Its central feature is a requirement that all federal agencies prepare an environmental impact statement (EIS) for proposals of major federal actions that significantly affect the quality of the human environment.[75] In addition to assessing the environmental impact of the proposed federal action,[76] the EIS must identify and describe:

> (ii) any adverse environmental effects which cannot be avoided should the proposal be implemented, (iii) alternatives to the proposed action, (iv) the relationship between local short-term uses of man's environment and the maintenance and enhancement of long-term productivity, and (v) any irreversible and irretrievable commitments of resources which would be involved in the proposed action should it be implemented.[77]

An agency must prepare an EIS only if the proposed "major Federal action[]" will significantly affect the quality of the human environment.[78] If an agency is unsure whether the action will significantly affect the quality of the human environment, it must prepare an environmental assessment

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[72] Kerry Emanuel, *Increasing Destructiveness of Tropical Cyclones Over the Past 30 Years*, 436 NATURE 686, 686 (2005). Another recent study by ten scientific research centers concluded that human activity is causing at least two-thirds of this increase in ocean surface temperatures. *See* Press Release 06-128, National Science Foundation, Hurricane Breeding Grounds Heat Up: Human Activities Affect Ocean Temperatures in Areas Where Hurricanes Form (Sept. 12, 2006), http://www.nsf.gov/news/news_summ.jsp?cntn_id=107991.

[73] 42 U.S.C. §§ 4321, 4331–4335, 4341–4347 (2006).

[74] *Id.* § 4321.

[75] *Id.* § 4332(2)(C).

[76] *Id.* § 4332(2)(C)(i).

[77] *Id.* § 4332(2)(C)(ii)–(v).

[78] *Id.* § 4332(2)(C).

(EA).[79] An EA is a "concise public document" that "briefly provide[s] sufficient evidence and analysis" to determine whether the action will significantly affect the quality of the human environment.[80] If the EA leads the agency to a "finding of no significant impact" (FONSI)[81] on the human environment, the agency does not have to prepare an EIS[82] but still must make the FONSI publicly available.[83] On the contrary, if the EA reveals that the action will significantly affect the quality of the human environment (meaning the EA does not lead to a FONSI), the agency must prepare an EIS.

The EIS is "an action-forcing device" meant to ensure that the agency makes its decision with respect to the purposes of NEPA.[84] The agency also must respect "scientific integrity"[85] in preparing the EIS.[86] After an EIS has been prepared, it must "accompany the proposal [for agency action] through the existing agency review processes."[87] According to NEPA's regulations,[88] this means that agency officials must "use the [EIS] in making decisions" regarding the proposed action.[89] So although NEPA does not dictate the agency's ultimate decision on the proposed action, NEPA does control the decisionmaking process by mandating consideration of the EIS. Thus, the EIS requirement embodies the spirit of NEPA, which "declares that it is the continuing policy of the Federal Government . . . to use all practicable means and measures . . . to foster and promote the general welfare, to create and maintain conditions under which man and nature can exist in productive harmony, and fulfill the social, economic, and other requirements of present and future generations of Americans."[90] President Richard Nixon's signing of NEPA on January 1, 1970 commenced the "environmental decade," and NEPA "has been hailed as one of the nation's

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79 40 C.F.R. § 1508.9 (2006).

80 *Id.* § 1508.9(a)(1).

81 40 C.F.R. § 1508.13 (2006).

82 40 C.F.R. § 1501.4(e) (2006).

83 *Id.* § 1501.4(e)(1).

84 40 C.F.R. § 1502.1 (2006).

85 40 C.F.R. § 1502.24 (2006).

86 An EIS is a "detailed statement" that "may reach several thousand" pages in length for a large project proposal such as the licensing of a nuclear power plant. ROBERT V. PERCIVAL ET AL., ENVIRONMENTAL REGULATION 785 (4th ed. 2003).

87 42 U.S.C. § 4332(C).

88 These binding regulations were promulgated by NEPA's Council on Environmental Quality (CEQ) "to tell federal agencies what they must do to comply with [NEPA]." 40 C.F.R. § 1500.1(a) (2006). CEQ is responsible for "review[ing] and apprais[ing]" the extent to which federal agencies are adhering to NEPA's underlying policy of environmental consciousness. 42 U.S.C. § 4344(3) (2006).

89 40 C.F.R. § 1505.1(d) (2006).

90 42 U.S.C. § 4331(a).

most important environmental laws."[91] Courts are willing to force agencies to comply with NEPA's provisions because those provisions promote decisionmaking that respects the purposes of the Act.[92]

B. Past Failures to Achieve Article III Standing

Anyone who sues an agency pursuant to NEPA must establish both Article III standing and Administrative Procedure Act (APA)[93] standing. This Note focuses solely on Article III standing, since it fundamentally precedes APA standing and the question of APA standing[94] generally has not been disputed in climate change lawsuits. As articulated by the Supreme Court in *Lujan v. Defenders of Wildlife*, the requisite elements of Article III standing to be established by the plaintiff in any federal case are (1) injury in fact, (2) causation, and (3) redressability.[95] This Section describes two NEPA cases in the early-1990s, *Foundation on Economic Trends v. Watkins* and *City of Los Angeles v. National Highway Traffic Safety Administration*, where the plaintiffs sought to compel government agencies to prepare environmental impact statements on the climate change impacts of their actions. The discussion of these two cases is an attempt to illuminate the meaning of "injury in fact" and "causation" as those terms apply to Article III standing.

The defendants in each case contested whether the plaintiffs had standing to sue. In *Watkins*,[96] the U.S. District Court for the District of Columbia initially ruled that the plaintiffs had met the standing requirements, but two years later reversed its own ruling in light of an intervening circuit court decision pertaining to standing requirements. Likewise, in *City of Los Angeles*, the District of Columbia Circuit Court granted the plaintiffs standing, but six years later, the circuit overruled that opinion in light of the in-

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[91] Bradley C. Karkkainen, *Toward a Smarter NEPA: Monitoring and Managing Government's Environmental Performance*, 102 COLUM. L. REV. 903, 904 (2002).

[92] *See* Lawrence Gerschwer, Note, *Informational Standing Under NEPA: Justiciability and the Environmental Decisionmaking Process*, 93 COLUM. L. REV. 996, 1001 (1993).

[93] 5 U.S.C. §§ 701–706 (2006).

[94] For a summation of the APA standing requirements, see, e.g., *Fla. Audubon Soc'y v. Bentsen*, 94 F.3d 658, 665 (D.C. Cir. 1996) ("In order to invoke judicial review of an alleged violation under the APA, a private individual must be 'adversely affected or aggrieved . . . within the meaning' of NEPA by some final agency action." (quoting Lujan v. Nat'l Wildlife Fed'n, 497 U.S. 871, 882–83 (1990).

[95] *See* Lujan v. Defenders of Wildlife, 504 U.S. 555, 560–61 (1992) (citations omitted). The enunciation of Article III standing doctrine in *Lujan* was cited with approval in the Court's most recent discussion of the subject. *See* Friends of the Earth v. Laidlaw Envtl. Services, 528 U.S. 167, 180–81 (2000). See *infra* Part IV for a detailed discussion of *Lujan* in the context of the *Watson* ruling.

[96] In reading this Note, remember that "*Watkins*" is the D.C. district court case, while "*Watson*" is the California district court case that is the subject of this Note.

tervening *Lujan* decision, which greatly affected standing jurisprudence.[97] The factual reasons and legal rationales for these reversals help to illustrate the requirements for climate change plaintiffs to achieve Article III standing pursuant to NEPA.

1. The "Injury in Fact" Element: Courts Renounce "Informational Standing"

The first element of Article III standing, "injury in fact" comprises an injury that is both (a) "concrete and particularized" and (b) "actual or imminent."[98] The theory of "informational standing" and its subsequent demise illustrate the limits of what constitutes a "concrete and particularized" injury. The theory of informational standing holds that an environmental group may sue a government agency for its failure to prepare an EIS, if the group requires the information produced by the EIS to perform the functions that are the group's *raison d'être*.[99] In 1990, two years before the Supreme Court decided *Lujan*, the U.S. District Court for the District of Columbia explicitly recognized the validity of informational standing in a climate change lawsuit involving government agencies and their NEPA obligations.[100] In this case, *Foundation on Economic Trends v. Watkins*, the plaintiffs alleged that the defendants—the U.S. Energy, Interior and Agriculture Departments—were required to address the greenhouse effect in their environmental impact statements on programs and actions that produce greenhouse gases.[101] The plaintiffs claimed that their "injury in fact" was an impairment of their "informational, educational, and activist functions" due to the defendants' failure to comply with NEPA.[102] The defendants filed a motion to dismiss contending that the plaintiffs lacked standing because their alleged injury was not "distinct and palpable," i.e., "concrete and particularized." The district court denied the motion and ruled that plaintiffs had standing, noting that informational standing was "well-recognized" in the District of Columbia Circuit.[103] The court also suggested that the pur-

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97 Cass R. Sunstein, *What's Standing After* Lujan? *Of Citizen Suits, "Injuries," and Article III*, 91 MICH. L. REV. 163, 164–65 (1992) (noting that *Lujan* "significantly shifts the law of standing").

98 *Lujan*, 504 U.S. at 560 (citations omitted).

99 *See* Gerschwer, *supra* note 92, at 998. These functions include, inter alia, "the collection, analysis, and dissemination of information on the environmental effects of government actions." *Id.*

100 Found. on Econ. Trends v. Watkins, 731 F. Supp. 530 (D.D.C. 1990) (order denying motion to dismiss).

101 *Id.*

102 *Id.* at 532.

103 *Id.* (citations omitted).

poses of NEPA supported the theory of informational standing.[104] The court's endorsement of informational standing, however, would not endure.

After the district court denied the *Watkins* defendants' motion to dismiss, and during the course of briefing on defendants' subsequent motion for summary judgment, the District of Columbia Circuit Court decided *Foundation on Economic Trends v. Lyng*.[105] In *Lyng*, the plaintiffs[106] sued to compel the Department of Agriculture to prepare an EIS for its "germplasm preservation program."[107] The plaintiffs did not allege that any of their members personally had been harmed by the agency's failure to prepare an EIS; they merely asserted that the germplasm program was inadequate in numerous ways and that they needed the information that would be contained in an EIS to inform their members about the issues raised by the germplasm program.[108] On cross-motions for summary judgment, the district court had dismissed the case, finding that plaintiffs had failed to state a cause of action under NEPA.[109] On appeal, the circuit court did not rule on the issue of whether plaintiffs had established an injury in fact (defendants had not contested the issue before the district court[110]) but discussed the issue at length.[111] Specifically, the circuit court stated, "we have never sustained an organization's standing in a NEPA case solely on the basis of 'informational injury.'"[112] The court expressed concern that recognizing the legitimacy of informational injury "would potentially eliminate any standing requirement in NEPA cases" because it would trivialize the causation and redressability requirements as well. If lack of information is the injury, it necessarily follows that the injury is caused by the agency's failure to prepare an EIS. Further, it follows that the injury can be redressed by compelling the agency to prepare an EIS.[113] So without formally renouncing the

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104 *See id.* ("The purpose of preparing environmental documentation under NEPA is to provide information.") (citations omitted).

105 943 F.2d 79 (D.C. Cir. 1991).

106 Foundation on Economic Trends is a private non-profit organization "active on issues of biotechnology and genetics engineering." *Id.* at 80.

107 *Id.* The word "germplasm" means the maintenance of plants "for the purposes of study, breeding or genetic research." *Id.*

108 *Id.* at 82, 85.

109 *Id.* at 82. The court held that the plaintiffs had not identified any particular action by the Department of Agriculture that would require the Department to prepare an EIS under NEPA. *Id.*

110 *Id.*

111 *See id.* at 82–85. The court did not find it necessary to rule on the injury in fact issue because it held that the plaintiffs lacked standing to sue because they had not challenged a particular "agency action" under the APA. *Id.* at 86–87.

112 *Id.* at 84.

113 *Id.*

theory of informational standing, the circuit court evinced its strong disapproval of it.

The district court got the message. In 1992, the court reversed its earlier decision and granted the *Watkins* defendants' motion for summary judgment, ruling that the plaintiffs did not have standing.[114] In so doing, the court noted that *Lyng* had "reexamined the informational standing concept and found it wanting."[115] The plaintiffs protested that *Lyng*'s criticism of informational standing was merely dicta, but to no avail.[116] The court now emphasized that to support standing, the plaintiff's injury must be "particularized," meaning different from an injury suffered by the public at large.[117] Detriment to "plaintiffs' programmatic activities in disseminating information about the greenhouse effect to the public" did not qualify as such an injury. *Lyng* had explained that the theory of informational standing was untenable because it would confer standing on plaintiffs whose injury is tantamount to "a mere interest in a problem."[118] This conferral could potentially vitiate the standing requirement in NEPA cases.[119] Thus, reflecting the court of appeals' concern that recognition of informational standing would wrongly dilute NEPA standing jurisprudence, the *Watkins* court resolved that the defendants had been right when they filed their motion to dismiss: the plaintiffs' alleged injury was not "distinct and palpable," and therefore they had failed to meet the "injury in fact" requirement of standing.[120] That reasoning is consonant with the Supreme Court's interpretation of Article III standing. Less than two months after the D.C. District Court granted the *Watkins* defendants' motion for summary judgment, the Supreme Court decided *Lujan v. Defenders of Wildlife*, emphasizing that a showing of "particularized injury" is necessary for a plaintiff to attain standing in federal court.[121]

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[114] Found. on Econ. Trends v. Watkins, 794 F. Supp. 395 (D.D.C. 1992).

[115] *Id.* at 398 (citing Found. on Econ. Trends v. Lyng, 943 F.2d 79, 82–85 (D.C. Cir. 1991)).

[116] *Id.* at 399.

[117] *Id.* at 397.

[118] *See* Found. on Econ. Trends v. Lyng, 943 F.2d at 85 ("The Supreme Court [in *Sierra Club v. Morton*] held . . . that "a mere 'interest in a problem,' no matter how long-standing the interest and no matter how qualified the organization is in evaluating the problem," is not sufficient to confer standing." (quoting Sierra Club v. Morton, 405 U.S. 727, 739 (1972))).

[119] Watkins, 794 F. Supp. at 398 ("If [informational] injury alone were sufficient [to confer standing], a prospective plaintiff could bestow standing upon itself in every case merely by requesting the agency to prepare the detailed statement NEPA contemplates." (quoting Found. on Econ. Trends v. Lyng, 943 F.2d at 85)).

[120] *Watkins*, 794 F. Supp. at 399.

[121] *See* 504 U.S. 555, 560-61 (1992). The Court defined "particularized injury" as an injury that affects the plaintiff in a "personal and individual way." *Id.* at 561 n.1.

2. The Causation Element: Courts Endorse a More Stringent Test

City of Los Angeles v. National Highway Traffic Safety Administration,[122] a 1990 District of Columbia Court of Appeals case, involved the National Resources Defense Council (NRDC) and the National Highway Traffic Safety Administration (NHTSA). NRDC argued that NHTSA was required to prepare an EIS pursuant to NEPA for its decision to set the 1989 Corporate Average Fuel Economy (CAFE) standard at 26.5 miles per gallon rather than the 27.5 miles per gallon contemplated by the Energy Policy and Conservation Act of 1975.[123] NRDC alleged that this difference would result in increased greenhouse gas emissions from cars, contributing to global warming that damaged natural areas used by NRDC's members for recreational and economic purposes.[124] Two of the three circuit judges on the panel, including Ruth Bader Ginsburg, found that NRDC had established standing.[125] All three judges concluded that the plaintiffs had established an injury in fact.[126] Addressing causation in his opinion for the court, Judge Wald wrote that the plaintiffs needed only to "show a *reasonable likelihood* that if NHTSA performed an [EIS], it would arrive at a different conclusion about the CAFE rollback."[127] That is, the plaintiffs had to show only a reasonable likelihood that NHTSA's failure to prepare an EIS caused the decision to "roll back" the standard, which in turn caused the plaintiffs' injuries. On redressability, the court held that the plaintiffs were not required to show that NHTSA's preparation of an EIS would effect any alleviation of climate change. The plaintiffs only had to show that compelling NHTSA to do so would "redress" their injuries insofar as "any serious effects in global warming will not be overlooked."[128] However, like the theory of informational standing in *Watkins*, the Wald panel's relatively expansive interpreta-

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122 City of Los Angeles v. Nat'l Highway Traffic Safety Admin., 912 F.2d 478 (D.C. Cir. 1990), *overruled by* Fla. Audubon Soc'y v. Bentsen, 94 F.3d 658 (D.C. Cir. 1996).

123 *See id.* at 482.

124 *Id.* at 483.

125 In dissent (but only on the issue of standing), Judge D.H. Ginsberg argued that NRDC lacked standing because it could establish neither causation nor redressability. *See id.* ("While the foregoing allegations make out an injury indeed, the NRDC has failed to explain how that injury can be traced causally to the challenged decision and how the relief it seeks could redress the harm it foresees.").

126 *See id.*

127 *Id.* at 497 (emphasis added).

128 *Id.* at 499. *See also* David R. Hodas, *Standing and Climate Change: Can Anyone Complain About the Weather?*, 15 J. LAND USE & ENVTL. L. 451, 476 (2000) ("Similarly, just as the correct causation test was 'some likelihood' that an EIS would influence the ultimate decision, so, with respect to redressability, the test is not whether changing the CAFE decision would reduce global warming, but whether 'an EIS would redress its asserted injury, i.e., that any serious effects in global warming will not be overlooked.'").

tion of Article III standing doctrine in *City of Los Angeles* subsequently would be rejected by the District of Columbia Court of Appeals.

That rejection transpired in 1996 when the District of Columbia Court of Appeals reviewed *Florida Audubon Society v. Bentsen*, a case involving plaintiffs who sued to compel preparation of an EIS for the Treasury Secretary's authorization of a tax credit for ethyl tertiary butyl ether (ETBE), an alternative fuel additive.[129] The plaintiffs alleged that the tax credit ultimately would lead to increased agricultural cultivation which would inflict environmental damage on wildlife areas enjoyed by plaintiffs.[130] Affirming the district court's ruling, the circuit court en banc held that the plaintiffs lacked standing because they had established neither injury in fact nor causation.[131] In so doing, the court explicitly overruled the Wald panel's causation analysis in *City of Los Angeles*, finding that it "[did] not conform to the Supreme Court's discussion of procedural rights standing in *Lujan*."[132] The court reasoned that an "adequate causal chain" in a NEPA case must comprise "at least two links": first, connecting the absence of an EIS to "some substantive government decision," and second, connecting that substantive decision to "the plaintiff's particularized injury."[133] By holding that the plaintiffs had to establish only a "reasonable likelihood" that preparing an EIS would alter the government's decision, *City of Los Angeles* had placed too much emphasis on the first link in the causal chain and given only cursory consideration to the second. The circuit court now held the appropriate test as whether there is a "substantial probability" that the government's decision, made without the EIS, created or increased a "demonstrable risk" of injury to the plaintiff's particularized interests.[134] Thus, *Florida Audubon Society* endorsed a more stringent causation analysis in two respects: the causation standard of "reasonable likelihood" used in *City of Los Angeles* had become "substantial probability,"[135] and the injury

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129 Fla. Audubon Soc'y v. Bentsen, 94 F.3d 658 (D.C. Cir. 1996).

130 *See id.* at 662 ("[Plaintiffs argue] that the tax credit, by increasing the market for ETBE, would stimulate production of the corn, sugar cane and sugar beets necessary to make the ethanol from which ETBE is derived, and that this increased crop production would, in turn, necessarily result in more agricultural cultivation, with its accompanying environmental dangers, in regions that border wildlife areas [plaintiffs] (or their members) use and enjoy.").

131 *Id.* at 672.

132 *See id.* at 668–69.

133 *Id.* at 668.

134 *Id.* at 668–69 .

135 The *Watson* ruling, discussed *infra* Part IV, applies the Supreme Court's "fairly traceable" causation standard, expounded in *Lujan*, not the District of Columbia circuit court's "substantial probability" standard in *Florida Audubon Society*. The District of Columbia Circuit formulated its "substantial probability" standard from a Supreme Court case involving plaintiffs who challenged zoning laws that allegedly violated their constitutional and civil rights by denying them access to low-cost housing. Warth v. Seldin, 422 U.S. 490 (1975). In

vis-à-vis causation must be a substantive one, and not mere agency neglect to prepare an EIS.

C. *The Supreme Court's "Constrained" Articulation of Article III Standing*

The Supreme Court most recently defined the boundaries of Article III standing in *Lujan v. Defenders of Wildlife*,[136] which Courts and commentators widely perceived as constraining those boundaries.[137] Environmental groups challenged the Secretary of the Interior's rule that the Endangered Species Act of 1973 (ESA)[138] did not apply to government action taken in foreign nations. The district court denied the Secretary's motion for summary judgment on the ground that the plaintiffs lacked standing and granted the plaintiffs' motion for summary judgment on the merits. The Court of Appeals for the Eighth Circuit affirmed the district court's order denying the Secretary's motion and requiring the Secretary to publish a new rule that the ESA did apply in foreign nations.[139] The Court's opinion, authored by Justice Scalia, addressed only the issue of whether the plaintiffs had standing to sue and held that the court of appeals had erred in denying the Secretary's motion for summary judgment. The Court found three "irreducible" elements of constitutional standing:

Warth, the Court held that the plaintiffs had failed to establish causation because they did not allege facts from which the Court could reasonably infer that, in the absence of the zoning laws, a "substantial probability" existed that they would have been able to obtain the low-cost housing. *See id.* at 504. The Supreme Court required the plaintiffs to show a "substantial probability" that their injury in fact (inability to obtain housing) would not exist in the absence of the alleged violations. In contrast, the District of Columbia Circuit applied the "substantial probability" language to the actions of the defendant in causing the injury, not to the plaintiff's injury itself. Thus, the District of Columbia Circuit's causation standard is an innovation, and lacks robust support from its putative precedent. At least one other circuit court has also criticized *Florida Audubon Society*'s formulation of the causation standard for "confus[ing] the issue of the likelihood of the harm, which is better addressed in the injury in fact prong of the analysis, with its cause." Comm. to Save the Rio Hondo v. Lucero, 102 F.3d 445, 451 (10th Cir. 1996).

136 504 U.S. 555 (1992).

137 *See, e.g.*, Sunstein, *supra* note 97, at 165 ("[*Lujan*] held that Article III required invalidation of an explicit congressional grant of standing to 'citizens.' The Court had not answered this question before." (footnote omitted)); Thomas O. Sargentich, *The Supreme Court's Administrative Law Jurisprudence*, 7 ADMIN. L.J. AM. U. 273, 273 (1993) ("[F]our Justices in *Lujan*—Justices Scalia, Rehnquist, White, and Thomas—enunciated a particularly constrained vision of the standing doctrine." (footnote omitted)).

138 16 U.S.C. §§ 1531–1544 (2006).

139 *Lujan*, 504 U.S. at 559. Originally, the district court ruled that the plaintiffs lacked standing and dismissed the case, but a divided court of appeals reversed that ruling and remanded the case, whereupon the district court ruled for the plaintiffs on the merits. *Id.*

> First, the plaintiff must have suffered an "injury in fact"—an invasion of a legally protected interest which is (a) concrete and particularized and (b) "actual or imminent, not 'conjectural' or 'hypothetical.'" Second, there must be a causal connection between the injury and the conduct complained of—the injury has to be "fairly . . . trace[able] to the challenged action of the defendant, and not . . . the result of the independent action of some third party not before the court." Third, it must be "likely," as opposed to merely "speculative," that the injury will be redressed by a favorable decision.[140]

Regarding "injury in fact," the Court noted that "particularized" meant "that the injury must affect the plaintiff in a personal and individual way."[141] It was this "particularity" requirement that invalidated the theory informational standing, according to *Foundation on Economic Trends v. Watkins*,[142] which was decided just a few months before *Lujan*.

Before discussing these standing requirements in application to the facts, the Court distinguished between two paradigmatic cases against the government: one where the plaintiff "is himself an object" of government action or inaction and another where the plaintiff is not. In the latter case, where the plaintiff's injury necessarily stems from government action or inaction with respect to a third party, the Court stated that "it is ordinarily 'substantially more difficult' to establish [standing]."[143] In support of this proposition, the Court noted that causation and redressability in such cases "hinge on" the choices of third parties not before the court, and so plaintiffs bear an additional burden to show that those third parties' choices "have been or will be made in such manner as to produce causation and permit redressability of injury."[144] *Lujan* was one of these latter cases.

1. The *Lujan* Court on "Injury in Fact"

When the D.C. District Court in *Watkins* reversed its earlier grant of standing, it resolved that the plaintiffs' injuries lacked concreteness and particularity. In contrast, the Supreme Court in *Lujan* rejected the plaintiffs' injuries because those injuries were not "imminent." The *Lujan* plaintiffs posited that they had sustained injuries related the Secretary's decision not to apply the ESA overseas. For example, Defenders of Wildlife members stated that they had previously traveled to foreign nations to observe endangered animals whose populations further would be threatened by the Secre-

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140 *Id.* at 560–61 (citations and footnotes omitted).

141 *Id.* at 560 n.1.

142 *See supra* Part II.B.1.

143 *Lujan*, 504 U.S. at 562 (citations omitted).

144 *Id.* (citation omitted).

tary's rule. Their affidavits indicated that they intended to return to these nations to observe the animals but had not decided or planned exactly when they would do so.[145] This lack of specificity was crucial, as the Court held that "such 'some day' intentions" are insufficient to meet the imminence requirement of injury in fact.[146] Thus, while the Court implicitly acknowledged that the injuries alleged in plaintiffs' affidavits were "concrete," it held that those injuries were not imminent.

As an alternative to the injuries alleged in the affidavits, plaintiffs submitted three different "nexus" theories as the basis of standing. In some NEPA cases, courts have upheld a plaintiff's standing under one of these theories, using a "geographic nexus" test to determine whether there is a sufficient connection between the plaintiff asserting the claim and the physical location suffering the environmental impact.[147] The Court rejected each of these "novel" theories either as inconsistent with prior decisions or simply "beyond all reason."[148]

2. The *Lujan* Plurality on Redressability

Next, the Court addressed the issue of redressability. This section of Justice Scalia's opinion garnered only a plurality of the Court, with Chief Justice Rehnquist, Justice White and Justice Thomas joining it. The Court posited that the plaintiffs had failed to establish redressability because it was uncertain whether government agencies would be bound by the Secretary's rule that ESA applied overseas. The agencies, which funded the projects that would be subject to ESA regulation, were not parties to the case. Despite the Secretary's express belief that his rule was binding on the agencies,[149] the Court believed that the agencies might not be bound because the Solicitor General had taken the position that they were not bound, and be-

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145 *Id.* at 563–64.

146 *Id.* at 564. The two dissenting Justices, Justice Blackmun and Justice O'Connor, believed that the lack of specific plans was a trivial deficiency, since the plaintiffs could easily purchase plane tickets to the areas where the endangered animals were located, and thereby presumably vitiate the deficiency identified by the Court. *Id.* at 592 (Blackmun, J., dissenting). The dissenting Justices also noted the "genuine issue of material fact" standard necessary to survive a motion for summary judgment, and posited that a reasonable factfinder could conclude that the plaintiffs would return to the areas, based on the plaintiffs' having "the requisite resources and personal interest in the preservation of the species." *Id.* at 590, 592.

147 *See* Cantrell v. City of Long Beach, 241 F.3d 674, 679 (9th Cir. 2001) ("In NEPA cases, we have described this "concrete interest" test as requiring a "geographic nexus" between the individual asserting the claim and the location suffering an environmental impact." (citing Douglas County v. Babbitt, 48 F.3d 1495, 1500 n.5 (9th Cir. 1995))).

148 *Lujan*, 504 U.S. at 565–67.

149 *Id.* at 595–96 (Blackmun, J., dissenting).

cause the agencies themselves were unclear on this issue.[150] As another matter, noting that the agencies generally provided "only a fraction" of total project funding, the Court stated that the plaintiffs had produced no evidence to show that the agency-supported projects would not transpire without agency funding.[151] Thus, the Court found that alleged harm to the endangered species would not be mitigated by a rule prohibiting agency funding of the projects.[152]

3. The *Lujan* Court Rejects "Congressional Conferral" of Standing

The Court's majority returns for the next part of the opinion, which held that the "citizen-suit" provision of the ESA did not create a basis for standing independent of Article III's requirements. These provisions, included in many environmental statutes, generally allow a person to sue for injunctive relief against a government agency that is in violation of the particular statute. The court of appeals had granted the plaintiffs standing pursuant to this provision of the ESA. The Supreme Court rejected this "congressional conferral" to citizens of a "self-contained" procedural right to have the Executive branch observe the law.[153] Recognizing this "procedural right," according to the Court, would be "[v]indicating the *public* interest," and hence permitting the courts to function outside of their proper constitutional role of protecting the rights of private individuals.[154] Thus, only the courts, and not Congress, may determine whether a federal plaintiff has standing to sue.

Reading *Lujan*'s description of the three "irreducible" elements of standing[155] effectively explains why the climate change plaintiffs in *Foundation on Economic Trends v. Watkins* were ultimately denied standing, and why the Wald panel's lenient causation analysis in *City of Los Angeles v. National Highway Traffic Safety Administration* was ultimately overruled. The "informational injury" of *Watkins* is not an injury in fact because it is not "concrete and particularized."[156] Likewise, the failure to prepare an EIS in *City of Los Angeles*, even if it causes the agency to make a "bad" deci-

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150 *Id.* at 568–69.

151 *Id.* at 571. Likewise to their objections to the Court's injury in fact analysis, the dissenting Justices thought there was at least a genuine issue of fact regarding whether the projects would be deterred by lack of agency funding. *Id.* at 599 ("Even if the . . . agencies supply only a fraction of the funding for a particular foreign project, it remains at least a question for the finder of fact whether threatened withdrawal of that fraction would affect foreign government conduct sufficiently to avoid harm to listed species.").

152 *Id.* at 571.

153 *Id.* at 573.

154 *See id.* at 576.

155 *See supra* text accompanying note 140.

156 *See supra* text accompanying note 140.

sion, does not constitute "causation" unless the bad decision causes an injury in fact (as described by *Lujan*) to the plaintiff. Thus, *Lujan* clarifies the discussion of those cases[157] and articulates what a federal court plaintiff must demonstrate to establish standing.

III. *FRIENDS OF THE EARTH V. WATSON*: A PERSUASIVE CASE FOR STANDING

Although scientists recognized the greenhouse effect and the possibility of anthropogenic global climate change in the early 1970s (and before),[158] a consensus on the potential scope of the problem has emerged only in the past two decades, as continually improving methods and models allow for more accuracy and less uncertainty in the field. Accordingly, the idea of any type of litigation based on climate change is a recent development.[159] The Plaintiffs of *Friends of the Earth v. Watson* have effectively utilized this improved science to attain Article III standing. A detailed description of the case will distinguish it from the failed climate change lawsuits discussed in Part II.

A. The Basic Legal Approach

The Defendants in *Friends of the Earth v. Watson* are the Overseas Private Investment Corporation (OPIC) and Export-Import Bank of the United States (Ex-Im).[160] OPIC and Ex-Im are government agencies that "provide insurance, loans, and loan guarantees for overseas projects or to U.S. companies that invest in overseas projects,"[161] many of which are fossil fuel- and energy-related. The Plaintiffs, environmental organizations and cities,[162] claim that these projects are the source of significant greenhouse

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[157] *See supra* Part II.B.1, II.B.2.

[158] *See* Kristen Choo, *Feeling the Heat: The Growing Debate over Climate Change Takes on Legal Overtones*, A.B.A. J., July 2006, at 29, 30–31 (noting that Swedish scientist Svante August Arrhenius recognized the greenhouse effect in 1896).

[159] David A. Grossman, *Warming Up to a Not-So-Radical Idea: Tort-Based Climate Change Litigation*, 28 COLUM. J. ENVTL. L. 1, 2 (2003). See this article for a detailed discussion of the viability of applying a tort framework in climate change litigation.

[160] In the lawsuit, the formal defendants are: (1) Peter Watson, in his official capacity as President and CEO of OPIC, and (2) Phillip Merrill, in his official capacity as Vice Chairman and First Vice President of Ex-Im. Amended Complaint (Second) at 1, Friends of the Earth v. Watson, No. C 02-4106, at 1 (N.D. Cal. Jan. 16, 2004) [hereinafter Complaint], *available at* http://climatelawsuit.org/documents/Complaint_2Amended_Declr_Inj_Relief.pdf.

[161] *Id.* at 2.

[162] The environmental plaintiffs are: (1) Friends of the Earth, Inc. and (2) Greenpeace, Inc. *Id.* at 1. The city plaintiffs are: (3) Boulder, Colorado, (4) Oakland, California, (5) Arcata, California, and (6) Santa Monica, California. *Id.*

gas emissions—eight percent *of the world's total.*[163] For example, Ex-Im approved more than $1.5 billion in loans and loan guarantees to finance contracts that allowed U.S. companies to provide services and supplies for oil and natural gas extraction in the Cantarell oil fields of Mexico.[164] Cantarell produces up to four hundred million barrels of oil per year for export to world markets.[165] When this oil is combusted or burned as fuel, it releases greenhouse gases into the atmosphere. These greenhouse gas emissions contribute to global climate change,[166] the force of past, present and future harm to Plaintiffs and their interests. NEPA requires "all agencies of the Federal Government" to prepare an EIS on proposals for "major Federal actions significantly affecting the quality of the human environment."[167] Ex-Im did not prepare an EIS on its actions related to the Cantarell oil fields. Nor did Ex-Im prepare an EA and publish a FONSI to establish that an EIS is unnecessary.[168] Plaintiffs cite numerous other OPIC- and Ex-Im-supported projects to illustrate the scope of the agencies' actions, allegedly taken without complying with NEPA.[169] Plaintiffs claim authority to sue under the Administrative Procedure Act.[170]

B. The Plaintiffs' Injuries

As Plaintiffs in this lawsuit, Friends of the Earth and Greenpeace are representing[171] their members, including Arthur and Anne Berndt[172] and

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[163] *See* Declaration of Richard Heede at 12, Friends of the Earth v. Watson, No. C 02-4106 (N.D. Cal. Aug. 23, 2005) [hereinafter Heede Declaration] ("Combined Ex-Im and OPIC emissions of carbon dioxide and methane total 1,911 million tones of carbon dioxide-equivalent on an annual basis. *This equals nearly 8 percent of the world's emissions of carbon dioxide.*") (emphasis in original) (footnote omitted), http://climatelawsuit.org/documents/Declr_Heede.pdf.

[164] Complaint, *supra* note 160, at 40–41.

[165] *Id.* at 41. Defendants' projects primarily export oil to the U.S., Western Europe, and Japan. *Id.* at 36–37.

[166] *See id.* at 2.

[167] 42 U.S.C. § 4332(C).

[168] *See generally supra* Part II.A (explaining NEPA's requirements).

[169] Complaint, *supra* note 160, at 39–46.

[170] 5 U.S.C. §§ 701–706. *See generally* Fla. Audubon Soc'y v. Bentsen, 94 F.3d 658, 665 (D.C. Cir. 1996) ("In order to invoke judicial review of an alleged violation under the APA, a private individual must be 'adversely affected or aggrieved . . . within the meaning' of NEPA by some final agency action." (quoting Lujan v. Nat'l Wildlife Fed'n, 497 U.S. 871, 882–83)).

[171] In general, an organization may sue on behalf of its members when three conditions apply: (1) an organization's member would have standing to sue in her own right, (2) the interests at issue in the suit are germane to the organization's purpose, and (3) the individual member's participation in the suit is not necessary to the claim or requested relief. Hunt v. Wash. State Apple Adver. Comm'n, 432 U.S. 333, 343 (1977).

[172] *See supra* Introduction (describing the impact of climate change on the Berndts' farm).

others discussed below. Four cities are also Plaintiffs: Boulder, Colorado and Oakland, Arcata, and Santa Monica, California. Together the Plaintiffs' injuries catalog the myriad detrimental effects of climate change. In part, these effects include the familiar, direct consequences of "global warming." For example, the city of Santa Monica claims that the sea level rise over the twenty-first century will cause increased "beach erosion and loss of sand." This will compromise the city's tourism-based economy, as the beach incurs damage and becomes less appealing to tourists.[173] The American public is familiar with the idea that global warming causes the sea level to rise, though the magnitude of the rise is uncertain. On the contrary, the public is likely unfamiliar with some of climate change's indirect effects, also injurious to Plaintiffs. For example, on Alaska's Kenai Peninsula, climate change allows the spruce bark beetle to reproduce at twice its normal rate.[174] The beetle eats spruce trees, and previously lived in ecological balance with the trees. Now, its increased population and accelerated life cycle have greatly disrupted that balance.[175] The result is four million acres of dead spruce forest (thirty-eight million dead trees), the largest insect-related tree loss known to have occurred in North America.[176] The massive dead forest presents a significant fire danger (exacerbated by rising temperatures), as well as detracts from Alaska's aesthetic appeal. Greenpeace member Melanie Duchin of Anchorage, Alaska, hikes, kayaks and sails in areas on the Kenai Peninsula every summer. Climate change thus impairs Ms. Duchin's recreational activities on the Peninsula by increasing the incidents of forest fire and diminishing the natural beauty of the area.[177]

Friends of the Earth member Dr. Phillip Dustan, a biology professor at the College of Charleston in South Carolina, began researching coral reefs off the Florida Keys in 1969. Since 1995, he has served as a principal investigator on the U.S. Environmental Protection Agency's Florida Keys Coral Monitoring Project. The "living coral cover" is decreasing dramatically on these reefs, and climate change is a "significant factor" in this

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173 Complaint, *supra* note 160, at 30–31.

174 *Id.* at 14.

175 World View of Global Warming, Global Warming in Alaska, http://www.worldviewofglobalwarming.org/pages/alaska3.html (last visited Mar. 6, 2006) ("Scientists, including Dr. Edward Berg and Dr. Kenneth Raffa, attribute the beetle infestation to rising average temperatures in South-Central Alaska in both winter and summer. More beetle larvae can survive, and higher summer temperatures allow the insects to mature faster and complete a two-year life cyle [sic] in one year. The trees, which previously lived in balance with the beetles, do not have enough natural defenses against this assault.").

176 Complaint, *supra* note 160, at 14.

177 *Id.* at 19–20.

loss,[178] which diminishes Dr. Dustan's ability to pursue his profession of conducting biological research. He says he can no longer "keep [his] head in the sand and keep studying the pure physiology and evolutionary biology of corals" without speaking up on the damage of climate change to the corals.[179] His main recreational activity, scuba diving, is less enjoyable now because there are far fewer fish on the reefs, which are unhealthy and much smaller than they were a decade ago. Dr. Dustan and his family are currently building a home on John's Island (ten miles southwest of Charleston),[180] which they have chosen to construct "higher and stronger than required by current [building] code," at a significant additional expense. This choice is the result of predicted increases in sea level, storm surge[181] frequency and heights, and hurricane severity, all caused by global climate change.[182] Thus, climate change is detrimental to Dr. Dustan's professional, recreational and economic interests.

The city of Boulder, Colorado supplies its citizens with drinking water primarily from mountain snow-pack. According to the Complaint, Boulder's snow-pack at upper elevations is only 25% of its normal average.[183] The snow-pack at lower elevations was completely gone when measured in April of 2002, "a condition never seen in the many decades of record keeping."[184] The city is concerned about its vulnerability to flash flooding, as many citizens live and work in the Boulder Creek floodplain, and expects increased rainfall intensities associated with climate change to heighten this risk.[185] Climate change thus threatens Boulder's interests in maintaining the health and safety of its citizens.

C. *The Plaintiffs' Scientific Evidence*

Several of the Plaintiffs' specific alleged injuries are consonant with the U.S. government's own assessment of the impacts of global climate change. For instance, as noted in the Introduction, the 2002 U.S. Climate Action Report predicts that Arthur and Anne Berndt's sugar maple trees will

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[178] *Id.* at 15–16 ("Combined with earlier studies dating from 1974, the Carysfort Reef [in the northern Florida Keys] has lost over 90% of its living coral cover. This reef is in a hastened state of ecological collapse.").

[179] *Id.* at 16.

[180] Their home will be "built on the shore of an estuary known as Stono River, approximately 5.5 miles from the ocean and on land eight feet above sea level." *Id.*

[181] "Storm surge" refers to "water that is pushed toward the shore by the force of the winds swirling around the storm." National Hurricane Center, Storm Surge, http://www.nhc.noaa.gov/HAW2/english/storm_surge.shtml (last visited Jan. 29, 2007).

[182] Complaint, *supra* note 160, at 16–17.

[183] *Id.* at 21.

[184] *Id.*

[185] *Id.* at 22.

have disappeared from Maverick Farm by the end of the century.[186] More important, however, is the fact that the Plaintiffs have enlisted a highly distinguished climate change scientist, Dr. Michael C. MacCracken, to elucidate the relationship between their injuries and Defendants' actions.

Dr. MacCracken has held several top positions in U.S. government programs dedicated to studying global climate change. He was the senior scientist at the Office of the U.S. Global Change Research Program in Washington, D.C., from 1993 to 2002, serving as the Program's first Executive Director from 1993 to 1997, during which time he coordinated the climate change research programs of ten federal agencies. From 1997 through 2001, he was the Executive Director of the National Assessment Coordination Office, in which capacity he was a lead author of reports in 2000 and 2001 that assessed the consequences of climate change in the U.S. He also prepared Chapter 6 of the 2002 U.S. Climate Action Report on the impacts of climate change and possible adaptation strategies. Dr. MacCracken contributed to each of the IPCC's three assessment reports[187] in various capacities and currently serves as the top scientist at the Climate Institute, the oldest non-governmental organization in Washington, D.C., dedicated to addressing the problem of global climate change.[188] Dr. MacCracken's Declaration confirms that each of Plaintiffs' alleged injuries is linked to a projected consequence of global climate change.[189] Importantly, he asserts that these projections "*reflect the strong consensus of opinion among qualified scientific experts* involved in climate change research in the U.S. and around the world."[190]

The *Watson* Plaintiffs allege injuries that are occurring right now, including monetary loses and threats to public health.[191] These are real injuries that bear no resemblance to the claim of "informational injury" alleged in *Foundation on Economic Trends v. Watkins*. The incredible volume[192] of greenhouse gases emissions allegedly caused by the OPIC and Ex-Im dwarfs the volumes involved in the previously discussed climate change lawsuits. Thus, for the purpose of determining whether the *Watson* plaintiffs have standing to sue, *Watson* should not be prejudiced by the failure of those previous climate change lawsuits.

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186 *See supra* notes 18–19 and accompanying text.

187 *See supra* Part I for a discussion of the findings of the Third Assessment Report (TAR).

188 MacCracken Declaration, *supra* note 39, at 5–6.

189 *See generally id.*

190 *Id.* at 7 (emphasis added).

191 For a complete list of Plaintiffs' alleged injuries, see Complaint, *supra* note 160, at 11–36.

192 *See infra* notes 255–56 and accompanying text.

IV. THE *WATSON* RULING: WHY IT WAS CORRECT

In its order denying the Defendants' motion for summary judgment, the U.S. District Court for the Northern District of California rejected all arguments that the Plaintiffs lacked Article III standing.[193] The following sections identify and evaluate the parties' opposing arguments on each element of standing, as advanced during the briefing on Defendants' motion for summary judgment. The sections also analyze the court's ruling on each element and explain why it was correct. Naturally, the authority relied upon by the parties comprises many Ninth Circuit cases, in addition to other courts of appeals and Supreme Court cases. Considering that fact, a skeptic might argue that the impact of the court's ruling will be limited to cases within the Ninth Circuit's jurisdiction. The following sections demonstrate, however, that the court's ruling is consonant even with the "constrained" view of standing promulgated by the Supreme Court in *Lujan v. Defenders of Wildlife*.[194] Consequently, the possibilities for this ruling to impact future climate change litigation extend to all U.S. jurisdictions.[195]

A. Injury in Fact

In their motion for summary judgment, the Defendants emphasized the notion that natural forces, rather than greenhouse gas emissions, may be the primary cause of Plaintiffs' injuries.[196] In turn, they asserted, the link between their projects' greenhouse gas emissions and Plaintiffs' injuries is too tenuous to support a valid injury in fact. It is unclear how this argument purports to contest either of the two elements of injury in fact. The argument is more pertinent to the causation inquiry than the injury in fact inquiry; it does not contest the evidence that Plaintiffs provided to show injury, but rather the cause of those injuries. In their opposition brief, Plaintiffs illuminated this irrelevance to the question of injury in fact.[197] For example, Plaintiffs Arthur and Anne Berndt allege that they are currently suffering and will continue to suffer a specific pecuniary loss: loss of maple syrup revenue due to the deterioration of their farm caused by climate change. Rationally, no amount of uncertainty about the causes of climate change can impeach the fact that the Berndts have suffered an injury.

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193 Order Denying MSJ, *supra* note 25.

194 504 U.S. 555 (1992).

195 *See* discussion *infra* Part V.

196 MSJ, *supra* note 27, at 11–12.

197 Opposition to MSJ, *supra* note 28, at 20. In the brief, the Plaintiffs cite the Supreme Court's decision in *Friends of the Earth v. Laidlaw Environmental Services*, 528 U.S. 167, 184 (2000), for the proposition that a plaintiff's "reasonable" concern that an injury will occur constitutes a valid injury in fact. Opposition to MSJ, *supra* note 28, at 20.

The Defendants contended that climate change science offers no support for some of Plaintiffs' injuries, which should render Plaintiffs' injuries insufficiently "actual or imminent." For example, they cited an IPCC report discerning "no significant trends" in hurricane intensity over the twentieth century outside of natural variations.[198] This would purportedly undermine, among others, Dr. Dustan's injury of paying more for his home, expecting a future increase in hurricane intensity. The Plaintiffs replied that they were not required to "provide specific proof of actual environmental harm" in order to demonstrate injury in fact and cited Ninth Circuit cases to support this point.[199] Plaintiffs' rebuttal (and its supporting cases) agrees with *Friends of the Earth v. Laidlaw Environmental Services*, where the Supreme Court held that the plaintiff's "reasonable concern" about the pernicious effects of the defendant company's illegal pollutant discharges into a river, which deterred him from exercising a recreational interest in the river, was sufficient to constitute an injury in fact.[200] The Defendants also claimed that the Plaintiffs alleged "conjectural future impacts" of climate change that were "too remote" (insufficiently actual or imminent) to support standing under *Lujan*.[201] However, the Plaintiffs' Complaint and declarations allege not only future impacts of climate change but also "impacts [that] are *already* affecting Plaintiffs' interests."[202]

Before addressing these specific countervailing arguments on standing in its order, the court mentions the often-cited[203] footnote seven[204] of Justice Scalia's opinion for the Court in *Lujan*.[205] That footnote pertains to cases in which a plaintiff alleges that a procedural violation has impaired his "separate concrete interest."[206] In such a case, the Court stated that a plaintiff can attain Article III standing "without meeting all the normal standards for redressability and immediacy."[207] The failure to prepare an EIS (or to

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198 MSJ, *supra* note 27, at 13. For a more recent, contrary view on the relationship between hurricanes and climate change, *see* Emanuel, *supra* note 72.

199 Opposition to MSJ, *supra* note 28, at 21. Plaintiffs argued that requiring such "specific proof" would "unduly hinder" enforcement of environmental statutes. *Id.* (citing Ocean Advocates v. U.S. Army Corps of Engineers, 361 F.3d 1108, 1120 (9th Cir. 2004)). Requiring such would entail the same environmental investigation that the Plaintiffs seek to compel. *See* Citizens for Better Forestry v. USDA, 341 F.3d 961, 972 (9th Cir. 2003).

200 528 U.S. at 183–85.

201 MSJ, *supra* note 27, at 13–14.

202 Opposition to MSJ, *supra* note 28, at 21 (emphasis in original).

203 *See* Douglas Sinor, *Tenth Circuit Survey: Environmental Law*, 75 DENV. U. L. REV. 859, 879 n.198 (1998) ("The procedural standing mentioned in *Lujan* is now sometimes referred to simply as 'footnote seven standing.'" (citation omitted)).

204 Lujan v. Defenders of Wildlife, 504 U.S. 555, 572 n.7 (1992).

205 Order Denying MSJ, *supra* note 25, at 3–4.

206 504 U.S. at 572.

207 *Id.* at 572 n.7.

determine if one is necessary) pursuant to NEPA is a procedural violation, so the footnote pertains to *Watson*'s standing analysis. As such, the court cites this footnote at the outset of its standing analysis for the proposition that the Plaintiffs are allowed "some uncertainty about redressability and causality."[208]

The court first addresses the Defendants' argument that the Plaintiffs' injuries are insufficiently imminent to support standing. Aside from the substantial likelihood that the Plaintiffs' injuries are in fact quite imminent,[209] the court stated that the Plaintiffs were not required to show that any particular "substantive environmental harm is imminent,"[210] nor that the projects supported by Defendants "will have particular environmental effects." The rationale of the court's latter statement may be deduced from the fact that the *purpose* of NEPA *is* to detail the "adverse environmental effects" of the Defendants' projects in an EIS.[211] Thus the court held that the Plaintiffs should not bear responsibility for doing what the Defendants have avoided in violation of NEPA.[212] The court's former statement enjoys support from footnote seven in *Lujan*, where the Court described the hypothetical NEPA case of a man whose home borders the proposed construction site of a federally licensed dam. If the licensing agency has failed to prepare an EIS for the dam, he may assert his procedural right to have the agency prepare the EIS "even though the dam will not be completed for many years."[213] The Court does not specify the extent to which such an injury[214] may deviate from the "'normal standards' for immediacy."[215] Regardless, the hypothetical evinces the Court's willingness to recognize injuries that may not materialize "for many years" as sufficient to confer standing in NEPA cases such as *Watson*. Therefore, the court's determination that plaintiffs have met the imminence requirement of injury in fact is supported both by Ninth Circuit cases and *Lujan* itself.

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208 Order Denying MSJ, *supra* note 25, at 3.

209 *See* discussion *supra* Part I.

210 Order Denying MSJ, *supra* note 25, at 4 (citing Cantrell v. City of Long Beach, 241 F.3d 674, 679 n.4 [sic] (9th Cir. 2001) (citing *Lujan*, 504 U.S. at 572 n.7)). The order mistakenly cites footnote four instead of the correct footnote three.

211 *See* National Environmental Policy Act of 1969 § 102(2)(C), 42 U.S.C. 4332(2)(C).

212 Order Denying MSJ, *supra* note 25, at 4 (citing Citizens for Better Forestry v. USDA, 341 F.3d 961, 972 (9th Cir. 2003)).

213 Lujan, 504 U.S. at 572 n.7.

214 In the hypothetical, the injury is the expected future building of the dam and concomitant detriment to the man's property interest.

215 *See* Sinor, *supra* note 203, at 880 ("Examination of the hypothetical . . . suggests the immediacy requirement for procedural plaintiffs is virtually eliminated when plaintiffs do not control the timing of the injury, such as in the case of the dam scenario." (citing Brian J. Gatchel, *Informational and Procedural Standing After* Lujan v. Defenders of Wildlife, 11 J. LAND USE & ENVTL. L. 75, 99 (1995))).

The court's order notes that an agency's failure to prepare an EIS engenders a risk that it will take environmentally uninformed actions.[216] This risk is the basis of a plaintiff's injury in fact in a NEPA case, since the plaintiff is alleging that those actions will effect the specific injuries he seeks to prevent or ameliorate.[217] The Supreme Court in *Laidlaw* held that a plaintiff who established "*reasonable* concerns" of injury resulting from Clean Water Act violations had met the injury in fact requirement.[218] The *Watson* court enunciates a similar Ninth Circuit standard, requiring the Plaintiffs to establish the reasonable probability that such failure will threaten their concrete interests.[219]

Concluding that the Plaintiffs have met this Ninth Circuit injury in fact standard, the court refers to its obligation "to draw all inferences" in favor of the Plaintiffs when deciding a motion for summary judgment.[220] But the court need not equivocate in light of the Defendants' failure even to challenge the Plaintiffs' most cogent argument pertaining to injury in fact. That is, Defendants do not try to explain how Plaintiffs' numerous *current* injuries are deficient in either "concreteness and particularity" or "actuality and imminence." Friends of the Earth member Dr. Dustan's livelihood as a marine biologist is compromised by the fact that seventy-five percent of the coral reefs he once studied are now gone.[221] Likewise, Arthur and Anne Berndt's revenue from maple syrup production is dissipating due to the increased prevalence of dieback in their trees.[222] Each of these cases epito-

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[216] *See* Order Denying MSJ, *supra* note 25, at 4.

[217] *Cf. Lujan*, 504 U.S. at 572 n.7 ("[U]nder [the Supreme Court's] case law, [a plaintiff] living adjacent to the site for proposed construction of a federally licensed dam has standing to challenge the licensing agency's failure to prepare an [EIS], even though he cannot establish with any certainty that the statement will cause the license to be withheld . . . .); *id.* at 573 n.8 ("[A plaintiff] assuredly can [enforce procedural rights], so long as the procedures in question are designed to protect some threatened concrete interest of his that is the ultimate basis of his standing.").

[218] *See* Friends of the Earth v. Laidlaw Envtl. Services, 528 U.S. 167, 183–84 ("[T]he affidavits and testimony presented by [Friends of the Earth] in this case assert that Laidlaw's discharges [into the river], and the affiant members' reasonable concerns about the effects of those discharges, directly affected those affiants' recreational, aesthetic, and economic interests."). The Court accepted Friends of the Earth's proposition that their members' "reasonable concerns" "would cause [them] to curtail their recreational use of [the river]," and held that "[t]he proposition is entirely reasonable, the District Court found it was true in this case, and that is enough for injury in fact." *Id.* at 184–85.

[219] Order Denying MSJ, *supra* note 25, at 4 (citing Citizens for Better Forestry v. USDA, 341 F.3d 961, 969–70 (9th Cir. 2003)).

[220] *Id.* at 5 (citing Freeman v. Arpaio, 125 F.3d 732, 735 (9th Cir. 1997)). *See generally* FED. R. CIV. P. 56(c).

[221] Complaint, *supra* note 160, at 16.

[222] Berndt Declaration, *supra* note 14, at 2–3 ("As a result [of dieback], the crowns of the trees are not as full or healthy. Smaller, less healthy crowns directly decrease the sap yield

mizes an injury that "affect[s] the plaintiff in a personal and individual way,"[223] to quote *Lujan* on particularity.[224] These Plaintiffs' injuries are *actually* occurring, so there is no question of imminence. The fact that these two Plaintiffs surely have demonstrated an injury in fact is important because the court need only find that one plaintiff has standing in order for the lawsuit to proceed.[225] Therefore, Plaintiffs have inarguably established an injury in fact. To deny that they have done so would be unreasonable in general, let alone justifiable for the purpose of deciding a motion for summary judgment.

B. Causation

Having successfully demonstrated an injury in fact, the Plaintiffs' next task was to establish a causal connection between that injury and the Defendants' actions. To make that connection under *Lujan*, a plaintiff must show that the injury is "fairly . . . trace[able] to the challenged action of the defendant, and not . . . the result [of] the independent action of some third party not before the court."[226] Noting that the Ninth Circuit had endorsed the *Lujan* causation standard,[227] the Defendants argued that third parties—private companies and individual persons—were the ones truly responsible for producing the greenhouse gas emissions that caused Plaintiffs' injuries. In support of this proposition, Defendants declared that "most large energy-related projects" involving either OPIC or Ex-Im would proceed even without the financial support of either agency.[228] Therefore, the argument runs, greenhouse gas emissions linked to these projects would occur independent of any actions taken by Defendants, so there is no causal connection between Plaintiffs' injuries and Defendants' actions. However, Defendants' official public statements belie their claim of playing "limited roles in any particular project."[229] For example, Ex-Im's 2000 annual report states that "[b]y targeting financing gaps and officially supported competition, Ex-Im

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and sweetness, and therefore negatively affect my revenue stream. I believe this die-back is caused in part by global warming and is an indication that climate change is beginning to affect my forest now."). For more on how climate change is affecting the Berndts' farm, see discussion *supra* Introduction.

223 Lujan v. Defenders of Wildlife, 504 U.S. 555, 560 n.1 (1992).

224 For more on "concreteness and particularity" in *Lujan*, see *supra* Part II.C.

225 Opposition to MSJ, *supra* note 28, at 8 (citing Watt v. Energy Action Educ. Found., 454 U.S. 151, 160 (1981)).

226 504 U.S. at 560–61 (citation omitted).

227 MSJ, *supra* note 27, at 14 (citing Ecological Rights Found. v. Pac. Lumber Co., 230 F.3d 1141, 1152 (9th Cir. 2000)).

228 *Id.* at 16.

229 *Id.* at 18.

Bank supports export sales that *otherwise would not have gone forward*."[230] Similarly, OPIC professes to "[e]valuate new projects to ensure that they would not have gone forward *but for* OPIC's involvement."[231] The Plaintiffs further cited reports produced by both Defendants evincing a recognition that their actions resulted in greenhouse gas emissions.[232] Thus, OPIC's and Ex-Im's pronouncements bolstered Plaintiffs' argument that Defendants were responsible for producing the greenhouse gas emissions that caused Plaintiffs' injuries.

The Defendants relied on *Florida Audubon Society v. Bentsen* and *Foundation on Economic Trends v. Watkins*, both discussed in Part II of this Note, to support the proposition that the "chain of causation" between Defendants' actions and Plaintiffs' injuries was too attenuated to meet the "fairly traceable" standard enunciated in *Lujan*. In *Florida Audubon Society*,[233] the plaintiffs proffered a decidedly elongated chain of causation from the Treasury Secretary's tax credit to their claimed environmental injuries.[234] The court refused to recognize this chain because of two factors: "[1] the *uncertainty* of several individual links [in the chain]" and "[2] the *number* of speculative links that must hold for the chain to connect the challenged acts to the asserted particularized injury."[235] Considering these factors, the court held that the plaintiffs had not established that their injuries were "fairly traceable to the passage of the tax credit."[236] The uncertainty was high largely because many of the links depended on speculation about actions of third parties unconnected with the lawsuit.[237] Although the Defendants did not explain how these factors should be applied to the present

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[230] Opposition to MSJ, *supra* note 28, at 24 (citing EXPORT-IMPORT BANK OF THE U.S., 2000 ANNUAL REPORT 2 (2000) (emphasis added), *available at* http://www.exim.gov/about/reports/ar/ar2000/2_mis_pro_glance_ovrview.pdf).

[231] *Id.* (citing OVERSEAS PRIVATE INVESTMENT CORPORATION, BUDGET REQUEST—FISCAL YEAR 2005, at 10 (2004) (emphasis added)).

[232] Opposition to MSJ, *supra* note 28, at 25 (citing OVERSEAS PRIVATE INVESTMENT CORPORATION, CLIMATE CHANGE: ASSESSING OUR ACTIONS 16–20 (2000), http://www.opic.gov/pdf/publications/climatereport.pdf; EXPORT-IMPORT BANK OF THE U.S., EX-IM BANK'S ROLE IN GREENHOUSE GAS EMISSIONS AND CLIMATE CHANGE 29–30 (1999)).

[233] Fla. Audubon Soc'y v. Bentsen, 94 F.3d 658 (D.C. Cir. 1996).

[234] *See id.* at 662 ("[Plaintiffs argue] that the tax credit, by increasing the market for ETBE, would stimulate production of the corn, sugar cane and sugar beets necessary to make the ethanol from which ETBE is derived, and that this increased crop production would, in turn, necessarily result in more agricultural cultivation, with its accompanying environmental dangers, in regions that border wildlife areas [plaintiffs] (or their members) use and enjoy.").

[235] *Id.* at 670 (emphasis added).

[236] *Id.* at 669.

[237] *Id.* at 670. For example, one link in the causal chain depended on the assumption that third-party farmers would decide to grow more corn and sugar cane, crops used to produce the tax-credited ETBE, in response to an enlarged market for ETBE. *Id.*

case,[238] the Plaintiffs sought to distinguish the present case from *Florida Audubon Society*.

The Plaintiffs contrasted the "extremely attenuated" chain of causation in *Florida Audubon Society*, which comprised several dubious links, with "the short, logical chain connecting the Defendants' actions to the increased risk to Plaintiffs' interests."[239] First, only a minimal number of steps is required to trace the production of fossil fuels (by the projects supported by Defendants) to the combustion of those fossil fuels by third parties (which causes the injuries suffered by Plaintiffs). Second, each of those steps is virtually certain to occur; since the projects' purpose is to produce fossil fuels *for consumption*, the steps are a logical and necessary means of achieving that end.[240] Thus, the Plaintiffs constructed a chain of causation strong enough to bear *Lujan*'s "fairly traceable" standard.

The court evidently agreed with Plaintiffs that *Florida Audubon Society* is inapposite, since the case does not appear in the court's order. In fact, the court's causation analysis concerns only the question of whether third parties caused Plaintiffs' injuries. As in its injury in fact analysis, the court cites footnote seven in *Lujan*, now to emphasize the "lower threshold

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[238] Indeed, the Defendants did not mention these factors at all, even as they relate to the court's opinion in *Florida Audubon Society*. Instead, Defendants mentioned *Florida Audubon Society* because it "cit[ed] with approval" Judge D.H. Ginsburg's dissenting opinion on standing in *City of Los Angeles v. National Highway Traffic Safety Administration*. MSJ, *supra* note 27, at 23. In the same sentence, Defendants claimed that Judge D.H. Ginsburg's "reasoning reject[ed] alleged impacts of climate change as sufficient to confer Article III standing." *Id.* This proposition is plainly specious in light of its use, which is to support Defendants' argument that any chain of causation involving climate change injury is insufficient as a matter of law. *Florida Audubon Society* explicitly overruled the majority's causation analysis in *City of Los Angeles*. *See supra* notes 132–34 and accompanying text. Judge D.H. Ginsburg's dissenting causation analysis in *City of Los Angeles* (of which *Florida Audubon Society* approved) did lead to a conclusion that climate change impacts were insufficient to support standing, but of course that conclusion pertained only to the facts of *City of Los Angeles*, which Defendants did not discuss in their motion for summary judgment.

[239] Opposition to MSJ, *supra* note 28, at 25 n.17, 26.

[240] Plaintiffs' calculations of Defendants' greenhouse gas emissions include indirect emissions, e.g., the carbon dioxide emitted by an automobile whose fuel was produced by one of Defendants' projects. *See* Heede Declaration, *supra* note 163, at 51. Though Defendants argued that the court should not consider these indirect emissions because they are not fairly traceable to Defendants' actions, NEPA explicitly mandates that agencies consider indirect effects in determining whether their actions are "significant," i.e., whether their actions require preparation of an EIS. 40 C.F.R. § 1508.25(c) (2006). NEPA defines indirect effects as effects that "are caused by the [agency] action and are later in time or farther removed in distance [than direct effects], but are still *reasonably foreseeable*." 40 C.F.R. § 1508.8(b) (2006) (emphasis added). Plaintiffs established that Defendants' indirect emissions were reasonably foreseeable effects of Defendants' actions, since the cause of indirect emissions (private fossil fuel consumption) is the very purpose those actions. *See supra* text accompanying this note.

[showing] for causation in procedural injury cases."[241] Accordingly, Defendants' contention that third parties caused Plaintiffs' injuries must be evaluated with respect to this lower threshold (which militates in favor of Plaintiffs).[242] In this context, the court references Defendants' pronouncements, cited by Plaintiffs, indicating that both Ex-Im and OPIC provide crucial financing for projects that otherwise would not proceed.[243] Although Defendants officially disclaimed this crucial role,[244] the court believed that their prior pronouncements commanded more respect, declaring, "Defendants have not submitted any authority demonstrating . . . that [Plaintiffs] have not met their burden regarding causation."[245] The court's silence on Plaintiffs' proffered "chain of causation" implicitly acknowledges its validity for the purpose of standing.

Lujan's "fairly traceable" causation standard, as applied in NEPA cases and others involving procedural violations, is much less demanding than the tort causation standard.[246] It only requires a plaintiff to show that the agency's action has contributed to an increased risk that plaintiff's injury in fact will actually occur.[247] Throughout the briefing on Defendants' motion for summary judgment, Plaintiffs and Defendants persistently disagreed about the proper way to measure Defendants' greenhouse gas emissions.[248] Plaintiffs have calculated that Defendants' combined annual greenhouse gas emissions equal eight percent of the worldwide total,[249] while

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[241] Order Denying MSJ, *supra* note 25, at 6. In one respect (that is inconsequential to the court's ruling on the issue of causation), the Ninth Circuit has interpreted footnote seven more broadly than the Supreme Court may have intended it to be interpreted. *Public Citizen v. Department of Transportation* interpreted footnote seven to endorse standing "even though there can be no certainty that the company will *ever* build the dam." Pub. Citizen v. Dep't of Transp., 316 F.3d 1002, 1018 (9th Cir. 2003) (emphasis added), *rev'd on other grounds*, 541 U.S. 742 (9th Cir. 2004). *See generally supra* text accompanying note 213 (describing footnote seven's hypothetical scenario). However, footnote seven did not expressly state that standing could be achieved even if the dam might *never* be built, only that standing could be achieved "even though the dam will not be completed for many years." Lujan v. Defenders of Wildlife, 504 U.S. 555, 572 n.7 (1992). *But see supra* note 215.

[242] Order Denying MSJ, *supra* note 25, at 6.

[243] *Id.* at 7.

[244] Defendants produced declarations in which Ex-Im and OPIC officials stated that "most large energy-related projects" would proceed without Defendants' financial support. *Id.*

[245] *Id.*

[246] *See* Opposition to MSJ, *supra* note 28, at 22–23.

[247] *See id.* at 22 (citing Comm. to Save the Rio Hondo v. Lucero, 102 F.3d 445, 451 (10th Cir. 1996)).

[248] *See supra* note 240.

[249] Heede Declaration, *supra* note 163 at 12. Richard Heede has published books and reports establishing methodologies to measure the greenhouse gas emissions of countries and individual companies. *See id.* at 2–3. Heede currently leads Climate Mitigation Services,

Defendants' reports[250] indicate that the figure is only one percent.[251] Also, Defendants contested the two central assertions in Dr. MacCracken's testimony: the connection between greenhouse gas emissions (in general) and Plaintiffs' injuries,[252] and the connection between Defendants' greenhouse gas emissions and Plaintiffs' injuries.[253] These challenges to Plaintiffs' evidence were irrelevant to the disposition of the motion for summary judgment, the court noted.[254] Beyond the disposition of the motion, Dr. MacCracken addresses the magnitude of greenhouse gas emissions that Defendants' already-approved projects will produce during their operational lifetimes (the next several decades). This quantity "is a large amount and will lead to larger changes in the climate and a greater risk that various climatic thresholds will be exceeded."[255] Specifically, it equals total worldwide greenhouse gas emissions for two years, or total U.S. greenhouse gas emissions for eight years.[256] Thus, Defendants' greenhouse gas emissions increase the likelihood of Plaintiffs' future injuries, as well as exacerbate Plaintiffs' present injuries.

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which he founded in 2002 to provide "emissions inventories" for "non-profit organizations, municipal governments, professionals, and individuals." *Id.* at 3.

250 The reports produced by Ex-Im and OPIC in 1999 and 2000, respectively. *See supra* note 232.

251 Opposition to MSJ, *supra* note 28, at 17. Defendants' reports also indicate that Defendants' share of worldwide greenhouse gas emissions will rise to two percent by 2015. *Id.* at 17–18. Among other differences from the Heede Declaration's methodology, the calculations in Defendants' reports do not include indirect emissions.

252 *See generally* Declaration of Dr. David R. Legates, Friends of the Earth v. Watson, No. C 02-4106 (N.D. Cal. Apr. 29, 2005) [hereinafter Legates Declaration], http://www.climatelawsuit.org/documents/legates_declaration.pdf. Dr. Legates contests the IPCC's finding (*see supra* note 32 and accompanying text) that human activity is the main cause of global warming. *See* Legates Declaration, *supra*, at 4–5 ("[I]t is my belief, shared by a large number of climatologists, that significant questions still remain as to the extent to which this 1°F (0.6°C) rise in air temperature [over the past century] can be attributed to anthropogenic increases in greenhouse gas concentrations."). Dr. Legates currently holds, or has held, positions such as "adjunct scholar" and "research fellow" at several institutions that have received over $2.5 million in funding from ExxonMobil and Exxon subsidiaries since 1998. *See* Exxon Secrets, http://www.exxonsecrets.org (last visited Mar. 4, 2006) (an interactive site detailing financial connections between "climate change skeptics" and ExxonMobil).

253 For Dr. MacCracken's assertion on the significance of Defendants' greenhouse gas emissions, see MacCracken Declaration, *supra* note 39, at 40–44. Defendants contend that their greenhouse gas emissions are too "minimal" to cause Plaintiffs' injuries. MSJ, *supra* note 27, at 19. This contention reflects the parties' disagreement about the proper way to calculate emissions. *See supra* note 194 and text accompanying notes 202–05.

254 Order Denying MSJ, *supra* note 25, at 5 ("[I]n considering a motion for summary judgment, the court may not weigh the evidence or make credibility determinations . . . ." (citation omitted)).

255 MacCracken Declaration, *supra* note 39, at 40.

256 *Id.*

C. *Redressability*

To establish redressability, Plaintiffs needed only to show that Defendants' financing decisions "could be influenced" by the (court ordered) preparation and consideration of an EIS.[257] Neither party argued at length on redressability, since Plaintiffs clearly have met this unimposing standard. Defendants have not undertaken any environmental review under NEPA with respect to the projects at issue in this lawsuit,[258] so mandating consideration of heretofore ignored environmental impacts has at least some chance of influencing Defendants' financing decisions. The court agreed.[259]

Footnote seven in *Lujan* supports this redressability standard, since it allows a plaintiff to achieve standing "even though he cannot establish with any certainty that the [EIS] will cause" the agency to make a particular decision.[260] Unlike the present case, "*Lujan* was not a procedural rights case."[261] Consequently, footnote seven relates to the present case, while the *Lujan* plurality's "constrained" redressability analysis does not. But even if it did, it would not threaten Plaintiffs' claim on redressability. The *Lujan* plurality thought the agencies at issue, who were not parties to the case, might be free simply to disregard any rule that the Interior Secretary promulgated in response to a court order.[262] Therefore, the court was powerless to redress plaintiffs' grievances. In *Watson*, there is no such concern that Defendants might not be bound by a court order, since they are (obviously) parties to the case. Noting that the agencies provided "only a fraction" of project funding, the *Lujan* plurality highlighted plaintiffs' dearth of evidence showing that the projects would not proceed without the agencies' funding.[263] In the present case, Plaintiffs have produced that evidence.[264] Thus, it is "likely, as opposed to merely speculative," that the court has the power to redress Plaintiffs' injuries.[265]

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257 Opposition to MSJ, *supra* note 28, at 27 (emphasis omitted) (quoting Citizens for Better Forestry v. USDA, 341 F.3d 961, 976 (9th Cir. 2003)).

258 Defendants have prepared neither an EA nor an EIS for any project.

259 Order Denying MSJ, *supra* note 25, at 7.

260 Lujan v. Defenders of Wildlife, 504 U.S. 555, 572 n.7 (1992). Presumably, the decision to withhold a dam's license and the decision to withhold project financing are indistinguishable for the purpose of assessing redressability according to footnote seven. Each decision is the ultimate relief sought by the plaintiff via the EIS.

261 Sinor, *supra* note 203, at 879. Sinor notes that *Lujan* "expressly rejected the court of appeals finding of a procedural injury." *Id.* at 879 n.203; *see also* discussion *supra* Part II.C.3.

262 *See supra* text accompanying note 150.

263 *See supra* text accompanying note 151.

264 *See supra* text accompanying notes 230–32.

265 *Lujan*, 504 U.S. at 561 (internal quotations omitted) (citation omitted).

By attaining Article III standing, the *Watson* Plaintiffs overcame a previously insurmountable legal obstacle in climate change litigation. While the *Watson* ruling in itself represents a triumph for climate change plaintiffs, the question remains whether the ruling also represents a broader trend toward standing in climate change lawsuits.

V. BEYOND THE *WATSON* RULING

For the environmental organizations, Friends of the Earth and Greenpeace, the *Watson* ruling vindicates their argument that the U.S. government should be doing more to reduce greenhouse gas emissions. Now that a U.S. court has recognized a legal right (standing) to sue for climate change injuries, surely U.S. citizens have a right to demand that their national leaders confront the problem, and do not suppress scientific research[266] that reveals the magnitude of the problem. The *Watson* ruling is also a vindication for the individual Plaintiffs, such as Dr. Dustan and the Berndts, who have presented a case that is not only legally sufficient for standing, but compelling. Their injuries—a marine biologist facing fewer and fewer research opportunities and a married couple resigned to the inexorable depreciation of their farm—are depressing to consider, and contrast sharply with the "informational injury" alleged in *Foundation on Economic Trends v. Watkins* or the mere damage to recreational areas alleged in *City of Los Angeles v. National Highway Traffic Safety Administration*.[267] The *Watson* Plaintiffs have achieved standing, in part, because their injuries are unique from those alleged in previous climate change lawsuits. The sad irony is that people across the U.S. are experiencing the same "unique" injuries as the *Watson* Plaintiffs.

This Part predicts that the *Watson* Plaintiffs' standing would be upheld by the Ninth Circuit Court of Appeals, based on the consistency of the

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[266] *See, e.g.*, Andrew C. Revkin, *Climate Expert Says NASA Tried to Silence Him*, N.Y. TIMES, Jan. 29, 2006, § 1, at 1 (After veteran NASA scientist Dr. James E. Hansen said in a lecture that the Earth would become "a different planet" without a significant reduction in greenhouse gas emissions, NASA public affairs officials threatened him with "dire consequences" if he made such statements in the future. One public affairs official refused National Public Radio's request for an interview with Dr. Hansen, telling the NPR producer that his job was "to make the president look good."); Andrew C. Revkin & Katharine Q. Seelye, *Report by E.P.A. Leaves Out Data on Climate Change*, N.Y. TIMES, June 19, 2003, at A1 (The White House's Council on Environmental Quality removed from an EPA report a sentence that read, "Climate change has global consequences for human health and the environment."). *See generally* Colin Macilwain & Geoff Brumfiel, *US Scientists Fight Political Meddling*, 439 NATURE 896, 896 (2006) ("Nobel-prizewinning biologist David Baltimore used the annual meeting of the American Association for the Advancement of Science (AAAS) in St Louis to denounce government suppression of scientific findings.").

[267] *See supra* Part II.B.1–2.

Watson ruling both with Ninth Circuit precedent[268] and the Supreme Court's decision in *Massachusetts v. EPA*.[269] This Part also explains why the favorable standing rulings in *Watson* and *Massachusetts v. EPA* do not necessarily mean that plaintiffs in other climate change cases can achieve standing.

A. The Ninth Circuit Would Affirm Plaintiffs' Standing on Appeal

After prevailing on the standing issue in August of 2005, the Plaintiffs filed their own motion for summary judgment in December of 2005. The Plaintiffs' motion leads with the assertion that "[t]his matter's merits are straightforward and there is little in actual dispute."[270] OPIC and Ex-Im are agencies that have taken major federal actions without evaluating the "reasonably foreseeable"[271] impacts of those actions on global climate change. Hence, the agencies have refused to comply with NEPA, and their actions are illegal. The Plaintiffs have requested the court to order the Defendants to comply with NEPA.[272] In response to the Plaintiffs' motion, OPIC and Ex-Im each filed a cross motion for summary judgment in January of 2006.[273] Since *Watson* is an administrative record case, it will be decided by motion rather than trial.[274] In deciding these motions, the court affords agency action[275] a high degree of deference. Specifically, the court may order the agencies to comply with NEPA only if it finds that their decision not to comply with NEPA was "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law."[276] Despite this deferential standard, it is worthwhile to consider what may happen if the court again rules in favor of the Plaintiffs. If the U.S. District Court for the Northern District of California grants Plaintiffs' motion for summary judgment, the Defendants will probably appeal the decision to the Ninth Circuit Court of Appeals and renew their challenge to Plaintiffs' standing.[277] This Note has established that the *Watson* district court's standing ruling rests easily

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268 *See supra* Part IV.

269 Massachusetts v. EPA, No. 05-1120 (U.S. Apr. 2, 2007).

270 Plaintiffs' Motion for Summary Judgment at 1, Friends of the Earth v. Watson, No. C 02-4106 (N.D. Cal. Mar. 31, 2006), *available at* http://www.climatelawsuit.org/2006/Pls.%20Mot.%20for%20Summary%20Judgment.pdf.

271 *See supra* note 240.

272 Complaint, *supra* note 160, at 47.

273 The Plaintiffs' and Defendants' motions were argued on April 14, 2006.

274 Telephone Interview with Ronald A. Shems, Partner, Shems, Dunkiel, Kassel & Saunders, in Burlington, Vt. (Feb. 1, 2006).

275 In the context of *Watson*, "agency action" means the Defendants' inaction in failing to comply with NEPA.

276 5 U.S.C. § 706(2)(A) (2006).

277 Telephone Interview with Ronald A. Shems, *supra* note 274.

within the Ninth Circuit's standing jurisprudence.[278] Therefore, the Ninth Circuit Court of Appeals would have no basis for finding that Plaintiffs lack Article III standing and would affirm Plaintiffs' standing.

The Supreme Court's decision in *Massachusetts v. EPA* bolsters this prediction. *Massachusetts v. EPA* arose from a rulemaking petition filed in 1999 by environmental organizations, which asked the EPA "to regulate greenhouse gas emissions from new motor vehicles" under the Clean Air Act.[279] In 2003 the EPA published an order denying that petition[280] and the petitioners[281] sought review of that order in the District of Columbia Court of Appeals.[282] The petitioners argued that section 202 of the Clean Air Act compels the EPA to regulate carbon dioxide from new motor vehicles because carbon dioxide is the principal greenhouse gas and thus "endanger[s] public health or welfare."[283] In June of 2006 a divided panel of the District of Columbia Court of Appeals ruled in favor of the EPA on the merits of case.[284] The panel discussed whether the plaintiffs had Article III standing but did not rule on the issue.[285] The Supreme Court reversed the judgment

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278 *See supra* Part IV.

279 *See* Massachusetts v. EPA, No. 05-1120, slip op. at 6 (U.S. Apr. 2, 2007) (internal quotations omitted) (citation omitted).

280 *Id.* at 8.

281 The petitioners were twelve states, three cities (New York City, Baltimore and Washington, D.C.), the territory of American Samoa and several environmental organizations including Friends of the Earth and Greenpeace. *See id.* at 1 nn.2–4.

282 *Id.* at 10.

283 Section 202 of the Clean Air Act provides in part:

> The [EPA] Administrator shall by regulation prescribe (and from time to time revise) in accordance with the provisions of this section, standards applicable to the emission of any air pollutant from any class or classes of new motor vehicles or new motor vehicle engines, which in his judgment cause, or contribute to, air pollution which may reasonably be anticipated to endanger public health or welfare.

42 U.S.C. § 7521(a)(1) (2006).

284 Massachusetts v. EPA, 415 F.3d 50, 58–59 (D.C. Cir. 2005), *rev'd*, Massachusetts v. EPA, No. 05-1120 (U.S. Apr. 2, 2007).

285 *See id.* at 54–56 (declining to rule on plaintiffs' standing despite noting that courts are generally required "to resolve Article III standing questions before proceeding to the merits of a case"). The judges were actually split on the standing issue. Two of the three judges ruled for the EPA on the merits, and one of those two ruled that the plaintiffs lacked standing because they had not established injury in fact. *Id.* at 59 (Sentelle, J., dissenting in part and concurring in the judgment) (arguing that the plaintiffs had "shown no harm particularized to themselves" because climate change "is harmful to humanity at large" and plaintiffs are merely "segments of humanity at large"). However, one judge, Judge Tatel, found that "at least one" plaintiff had standing and argued that the language of the Clean Air Act compels the EPA to regulate greenhouse gas emissions from motor vehicles, absent "a reasonable basis for refusing to do so" which the EPA had not shown. *Id.* at 62 (Tatel, J., dissenting). That one plaintiff was Massachusetts, which alleged that it would lose coastal land and sustain damage to coastal property from increased sea levels and storm surge. *Id.* at 64–65.

of the District of Columbia Court of Appeals[286] and held that the petitioners met the Article III standing requirements.[287] Though *Massachusetts v. EPA* was not a NEPA case like *Watson*, the Court characterized *Massachusetts* as a procedural rights case. The *Massachusetts* petitioners had a procedural "right to challenge agency action unlawfully withheld," meaning the EPA's allegedly unlawful refusal to regulate carbon dioxide from new motor vehicles under the Clean Air Act.[288] Because *Massachusetts* was a procedural rights case like *Watson*, the Court applied less-demanding Article III standing requirements.[289] Also, the Court wrote that the State of Massachusetts was "entitled to special solicitude in [the Court's] standing analysis" because a State is a quasi-sovereign entity with an interest in preserving "all the earth and air within its domain."[290] In this case Massachusetts had such an interest in protecting its sovereign territory from the effects of climate change.[291] However, the Court did not explain specifically how this "special solicitude" for state plaintiffs affected its Article III standing analysis.

Regarding the Article III standing elements, the Court found that the State of Massachusetts's injury in fact—loss of coastal land and damage to coastal property—met the standards of *Lujan v. Defenders of Wildlife*.[292] The fact that climate change injuries like coastal land loss are "widely shared" by citizens and states across the U.S. was inconsequential to the Court's finding of injury in fact.[293] Rising sea levels had already begun to encroach on Massachusetts's land and this coastal land loss will increase for the foreseeable future, potentially costing the state hundreds of millions of dollars.[294] In its causation analysis, the Court noted that the U.S. transporta-

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Judge Tatel found these injuries sufficiently "particularized." *Id.* at 65. On the merits of the case, Judge Tatel rejected the EPA's various justifications for disregarding the statutory language. *Id.* at 67–82; *see generally id.* at 67 ("The [EPA] Administrator *shall* by regulation prescribe . . . standards applicable to the emission of any air pollutant from any class or classes of new motor vehicles or new motor vehicle engines which in his judgment cause, or contribute to, air pollution which may reasonably be anticipated to endanger public health or welfare." (quoting 42 U.S.C. § 7521(a)(1)) (emphasis added by author)).

286 Massachusetts v. EPA, No. 05-1120, slip op. at 32 (U.S. Apr. 2, 2007).

287 *See id.* at 23.

288 *See id.* at 14.

289 *See id.* ("[A] litigant . . . vested with a procedural right . . . has standing if there is some possibility that the requested relief will prompt the injury-causing party to reconsider the decision that allegedly harmed the litigant." (citing Lujan v. Defenders of Wildlife, 504 U.S. 555, 572 n.7 (1992))).

290 *See id.* at 15, 17 (quoting Georgia v. Tenn. Copper Co., 206 U.S. 230, 237 (1907)).

291 *See id.* at 16–17.

292 *See id.* at 18–20. Even if only one plaintiff meets the Article III standing requirements, the case proceeds. *See id.* at 15.

293 *See id.* at 19.

294 *See id.* at 19–20.

tion sector produces over six percent of global carbon dioxide emissions and that the EPA did not dispute the causal connection between carbon dioxide emissions and climate change.[295] Though EPA's refusal to regulate carbon dioxide from new motor vehicles implicates only some portion of that six percent, the size of the portion was unimportant in the Court's causation analysis.[296] Because that six percent constitutes "a meaningful contribution" to climate change and thus to Massachusetts's injury, the petitioners met the lowered causation standard for procedural rights cases.[297] Regarding redressability, the petitioners asked the Court to require EPA "to apply the correct legal standard" in deciding whether to regulate carbon dioxide under the Clean Air Act.[298] The ultimate relief sought was to enforce EPA's alleged "duty to take steps to slow or reduce" climate change.[299] Because this relief would ameliorate Massachusetts's injury "to some extent," the petitioners established redressability.[300]

The foregoing standing analysis in *Massachusetts v. EPA* affirms the veracity of the *Watson* ruling. The injuries alleged in *Watson*, such as diminishing professional research opportunities and farm revenue, are occurring now and will continue to occur, i.e., they are both actual and imminent like Massachusetts's injury. Arguably, the injuries in *Watson* are even more "particularized" than the loss of coastal land that sufficed in *Massachusetts*[301] since they relate specifically to the livelihoods of the Plaintiffs and are thus less widely shared. Because *Watson* is a NEPA case, the court required the Plaintiffs to establish the "reasonable probability" that OPIC and Ex-Im's ongoing support of fossil fuel projects without regard for NEPA would exacerbate the Plaintiffs' current injuries and increase the risk of future injuries.[302] The eight percent of worldwide carbon dioxide emissions produced by OPIC and Ex-Im represented this reasonable probability,

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295 *See id.* at 20–21.

296 *See id.* at 21–22. The Court rejected EPA's "erroneous assumption that a small incremental step," i.e., EPA's refusal to reduce that six percent by some small portion, "can never be attacked in a federal judicial forum" because it is incremental. *See id.* at 21. If that assumption were true, standing would not exist in "most challenges to regulatory action" because agencies "do not generally resolve massive problems in one fell regulatory swoop." *See id.*

297 *See id.* at 22.

298 *See* Brief for the Petitioners at 3, Massachusetts v. EPA, No. 05-1120 (U.S. Apr. 2, 2007), *available at* http://docs.nrdc.org/globalwarming/glo_06083101A.pdf.

299 *See* Massachusetts v. EPA, No. 05-1120, slip op. at 22 (U.S. Apr. 2, 2007) (emphasis omitted).

300 *See id.* at 23.

301 *See generally id.* at 19–20 (stating that because Massachusetts "owns a substantial portion of the state's coastal property," the loss of coastal land is "a particularized injury in [Massachusetts's] capacity as a landowner").

302 *See supra* note 219 and accompanying text.

which is an element of injury in fact in NEPA cases. In *Massachusetts* the Supreme Court addressed the amount of emissions from the U.S. transportation sector in its causation rather than injury in fact analysis, reflecting the fact that *Massachusetts* was not a NEPA case. The Court held that EPA's failure to regulate carbon dioxide in the U.S. transportation sector—responsible for six percent of worldwide carbon dioxide emissions—"contributes" to Massachusetts's injury.[303] The Court rejected EPA's argument that this contribution was too insignificant to support standing, noting that agencies typically solve problems through incremental regulation rather than drastic panaceas.[304] Therefore, the relative smallness of the emissions at issue did not shield the EPA from accountability for the allegedly unlawful inaction that produced those emissions.[305] Thus the Court did not require a particular percentage of carbon dioxide emissions to establish causation. Though *Watson* and *Massachusetts* discussed the defendant's contribution to climate change in different parts of their respective standing analyses, both of those discussions essentially answered the question of whether the defendant's contribution was significant enough to support Article III standing. In *Massachusetts* the Supreme Court held that some portion of six percent of global carbon dioxide emissions was significant enough for standing. A fortiori, the whole eight percent of global carbon dioxide emissions produced by OPIC and Ex-Im in *Watson* could support standing. In *Watson* the Plaintiffs easily met the last standing element of redressability without any serious contention[306] and nothing in *Massachusetts* impugns the validity of the *Watson* ruling on redressability. Therefore, Supreme Court precedent as well as Ninth Circuit precedent supports the *Watson* ruling and the *Watson* Plaintiffs' standing would be upheld on appeal.

B. Uncertainty Remains for Standing in Future Climate Change Litigation

The standing rulings in *Friends of the Earth v. Watson* and *Massachusetts v. EPA* do not necessarily indicate that plaintiffs in other climate change cases will be able to meet the Article III standing requirements. The question of whether a plaintiff has standing concerns the particular facts of the case. As described in Part III of this Note, the facts of *Watson* distinguished it from previous climate change lawsuits filed pursuant to NEPA, where plaintiffs ultimately did not meet the requirements of Article III standing. In light of the successes in *Watson* and *Massachusetts*, other plaintiffs in procedural rights cases should be able to assert injuries that meet

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303 *See* Massachusetts v. EPA, No. 05-1120, slip op. at 20 (U.S. Apr. 2, 2007).

304 *See id.* at 20–21.

305 *See id.* at 21.

306 *See supra* Part IV.C.

Lujan's requirement of "actual or imminent" and "concrete and particularized" injury.[307] For example, anyone in the U.S. who loses revenue through depreciation of his farmland caused by climate change experiences an injury in fact that is practically identical to that of Arthur and Anne Berndt.[308] Likewise, many coastal cities and states could claim diminished tourism revenue resulting from damage to beaches caused by climate change.[309] Establishing causation could be more difficult. The *Watson* Plaintiffs easily demonstrated that their injuries were "fairly traceable" to the Defendants rather than third parties because the Defendants publicly proclaimed their essential roles in the greenhouse gas-producing projects.[310] Future plaintiffs have no guarantee that that their chosen defendants will have made such regrettable statements, and so those defendants might more plausibly claim that someone else is responsible for the plaintiff's injury. Also, the plaintiff must show that the defendant's actions produce enough greenhouse gas emissions to increase the risk that the plaintiff's asserted injury will occur.[311] The Supreme Court in *Massachusetts* did not indicate precisely how much is enough for causation, but some government agencies whose actions produce only small emissions may not "make a meaningful contribution"[312] to climate change. Therefore a plaintiff might not be able to establish causation in a procedural rights case against such an agency.[313]

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307 Lujan v. Defenders of Wildlife, 504 U.S. 555, 560–61 (1992) (internal quotations omitted).

308 *See generally supra* Part IV.A (discussing the legal sufficiency of the Berndts' injuries).

309 *See generally* text accompanying note 173 (describing Santa Monica's injury).

310 *See supra* text accompanying notes 230–31.

311 *See supra* notes 246–47 and accompanying text.

312 Massachusetts v. EPA, No. 05-1120, slip op. at 22 (U.S. Apr. 2, 2007).

313 *Massachusetts v. EPA* does suggest that the climate change plaintiffs in *California v. National Highway Traffic Safety Administration* should be able to meet the Article III standing requirements. California v. Nat'l Highway Traffic Safety Admin., No. 06-72317 (9th Cir. filed May 3, 2006). There, plaintiff states and cities are challenging NHTSA's proposed action to raise CAFE standards for model year 2008–2011 light trucks, arguing that the implementation of those standards does not comply with NEPA. *See* Choo, *supra* note 158, at 34. NHTSA's decision on CAFE standards will implicate a smaller volume of greenhouse gas emissions than was involved in *Watson*. *See, e.g.*, City of Los Angeles v. Nat'l Highway Traffic Safety Admin., 912 F.2d 478, 484 (D.C. Cir. 1990) (noting that a one mile per gallon difference in CAFE standards would increase worldwide greenhouse gas emissions by "less than one percent"), *overruled by* Fla. Audubon Soc'y v. Bentsen, 94 F.3d 658 (D.C. Cir. 1996). However, the volume of greenhouse gas emissions involved in *California* will likely be close to the volume involved in *Massachusetts v. EPA*, as both cases involve only some portion of the total amount of emissions produced by the U.S. transportation fleet. Since the Supreme Court in *Massachusetts* ruled that this indefinite portion supported a finding of causation (*see supra* text accompanying notes 296–99), the Ninth Circuit in *California* should rule that the portion produced by NHTSA's allegedly unlawful actions supports the requisite connection in NEPA jurisprudence between the plaintiffs' injuries and the agency's action under NEPA. As a coastal State, California can allege virtually identical injuries to

Outside the realm of procedural violations, the precedential value of *Watson* and *Massachusetts* to climate change plaintiffs is even less predictable. Climate change plaintiffs in tort cases could establish injury in fact just as surely as the climate change plaintiffs in *Watson* and *Massachusetts* because injury in fact standards, unlike causation and redressability standards, are not diminished in procedural rights cases.[314] But a plaintiff in a public nuisance lawsuit against energy companies whose power plants produce large amounts of greenhouse gases[315] would face a more robust Article III standing test than the plaintiffs faced in the procedural cases of *Watson* and *Massachusetts*. *Lujan*'s normal causation and redressability standards[316] would apply. Therefore, the *Watson* and *Massachusetts* standing decisions would not pertain to such a case.

CONCLUSION

OPIC and Ex-Im want no part of environmental impact statements, or for that matter anything NEPA-related; and for good reason. Complying with NEPA would entail a substantial amount of work for both agencies and produce publicly available documents that detail their contributions to global climate change. For example, Ex-Im would first prepare an EA to determine whether its financing of overseas fossil fuel and energy projects "significantly affects the quality of the human environment." If the EA led Ex-Im to answer that question affirmatively, Ex-Im might have to prepare the "programmatic" EIS that Plaintiffs have requested the court to order. This programmatic EIS would catalog Ex-Im's past, present, and foreseeable future financing decisions and evaluate the environmental effects of the

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those of Massachusetts in *Massachusetts v. EPA* and thereby establish injury in fact. *See generally* Massachusetts v. EPA, No. 05-1120, slip op. at 18–20 (U.S. Apr. 2, 2007) (describing Massachusetts's injuries). And as a State generally, California should be entitled to the same "special solicitude" in the Ninth Circuit's standing analysis as the Supreme Court afforded the State of Massachusetts in *Massachusetts v. EPA* (whatever the practical implications of that special solicitude). *See supra* notes 290–91 and accompanying text. As in *Watson*, the *California* plaintiffs' request that NHTSA comply with NEPA in implementing CAFE standards should establish redressability. Therefore, the *California* plaintiffs should have Article III standing.

[314] *See* Order Denying MSJ, *supra* note 25, at 5–6 ("In cases asserting a procedural challenge, once a plaintiff establishes an injury in fact, the causation and redressability standards are relaxed." (citing Lujan v. Defenders of Wildlife, 504 U.S. 555, 572 n.7 (1992))).

[315] Several states, New York City, and other organizations filed such a lawsuit in 2004. Connecticut v. Am. Elec. Power Co., 406 F. Supp. 2d 265 (S.D.N.Y. 2005). The court dismissed the suit in 2005 on the grounds that it presented "non-justiciable political questions," *see id.* at 274, and thus did not address whether the plaintiffs had Article III standing. The plaintiffs have appealed that dismissal to the Second Circuit Court of Appeals. *See* Choo, *supra* note 158, at 34. *See generally* Grossman, *supra* note 159, at 52–59 (arguing that public nuisance law provides the best foundation for a tort-based climate change lawsuit).

[316] *See supra* text accompanying note 140.

greenhouse gases emitted as a result of those decisions. Ex-Im would be required to evaluate those effects with respect for scientific integrity,[317] and to consider less environmentally harmful alternatives to their decisions. Considering the above, if the *Watson* court grants the Plaintiffs' motion for summary judgment, the Defendants almost certainly will appeal that decision to the Ninth Circuit, and the *Watson* Plaintiffs' standing to sue will again be at issue.

This Note has explained why the U.S. District Court for the Northern District of California got it right: the *Watson* climate change Plaintiffs have standing to sue. The *Watson* Plaintiffs' injuries and are both "concrete and particularized" and "actual or imminent." Their injuries are "fairly traceable" to Defendants' greenhouse gas emissions, as Plaintiffs' expert scientific testimony has shown that those emissions exacerbate Plaintiffs' current injuries, while making their anticipated injuries more likely to occur. Finally, those injuries can be redressed by a decision compelling OPIC and Ex-Im to follow NEPA, the law passed by Congress precisely for the purpose of preventing what the Defendants are now doing: making environmentally uninformed decisions at the expense of U.S. citizens.

Whether the *Watson* Plaintiffs will ultimately prevail on the merits is a question beyond the scope of this Note. What this Note has established, however, is that Arthur and Anne Berndt at least have a case. That only seems just, considering what they have lost.

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[317] 40 C.F.R. § 1502.24 (2006). The effect of this requirement is that Dr. Legates, Defendants' climate change expert, would not be allowed to help prepare the EIS. *See supra* note 252.